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U.S. Military Force—1980
An Evaluation

A common sense analysis in plain language of the United States' national defense forces and needs.

By the Staff of the
Center for Defense Information
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"There is too much pessimism about our current capability. I would not swap our present military capability with that of the Soviet Union, nor would I want to trade the broader problems each country faces."

General David C. Jones USAF
Chairman, Joint Chiefs of Staff

"The new military budget is a paradox, at the highest price in our peace-time history, it does not provide for the defense of the United States. The armed forces and weaponry that it provides cannot protect the American people from nuclear war, cannot guarantee victory in conflicts in foreign countries, cannot prevent disagreeable changes in the world, and cannot assure prosperity at home. The $162 Billion military budget cannot make the world stable or safe for the U.S. No amount of military forces will assure American dominance or unquestioned military superiority in the world of the 1980s."

Rear Admiral Gene R. LaRocque, USN (Ret)

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Center for Defense Information

U.S. Military Force — 1980
An Evaluation

Introduction

National security consists of a number of factors and requires a variety of strengths — non-military as well as military. The United States is by all measures the strongest nation in the world. No other country, not even the Soviet Union, can compete with the U.S. in economic power, technological capability, productivity, social progress, natural resources, standard of living and attractive way of life. No nation in history has demonstrated equal generosity and human good will in its foreign relationships and magnanimous sharing of its strength.

The U.S. also maintains a huge, modern and effective military establishment designed mainly to deter nuclear war and to aid its allies and friends. Since World War II, the U.S. has deployed more armed forces overseas far from its sovereign borders, projected its armed powers into the affairs of unstable areas more frequently, dropped more bombs, fired more shells, killed more enemy soldiers — and more non-combatants — than any other nation on earth.

We continue to be the largest source of weapons for the world. Since World War II, the U.S. has given and sold more arms and ammunition to its allies, clients and erstwhile friends than all other world weapons suppliers combined. For three decades the U.S. armaments business has been a major growth industry. The United States is *the* global military superpower. Yet, the paramount threat suspended over the United States and most of mankind is possible death and destruction from nuclear war. The horrible potential of nuclear weapons employment has fundamentally changed the strategic and security relationships between nations forever. There will be no winners in nuclear war, and there is no defense against the 15,000 strategic weapons and 30,000 tactical nuclear weapons now in the arsenals of the nuclear powers.

Primary national defense policy objectives of recent U.S. administrations have been: to deter nuclear war with the Soviet Union, the other nuclear superpower; to restrain the development of additional nuclear powers; to control nuclear weapons proliferation; and eventually to limit, control and reduce the excesses of nuclear

weapons now in existence. Nevertheless, nuclear weapons and the danger of nuclear war are increasing.

In today's world of extensive nuclear weapons' capabilities and the danger of nuclear war, large conventional armed forces, increasing military spending, and many regional instabilities, the U.S. must constantly determine where it has a direct national interest, the extent and type of interest, what its responsibilities are to other nations, and how much of our resources and efforts need to be devoted to weapons and the projection of our military power to other countries. How much military force is enough in light of the growing realities of the limits of military force as a means to achieve our national objectives?

This report is a review by the Center for Defense Information of how much and what kind of armed forces the United States has and needs to assure a strong and adequate military establishment able to defend our nation, to protect our interests in other countries and, above all, to prevent, if possible, a nuclear war while at the same time not depleting our resources and bankrupting the nation with excessive and non-productive military programs. The Center for Defense Information opposes unnecessary military spending. It believes strong social, economic, political and military strengths contribute equally to the security of our nation.

Gene La Rocque

Rear Admiral Gene R. La Rocque
U.S. Navy (Ret.)
Director

NATIONAL INTERESTS

The well-being of our nation and the character and spirit of our people depend on peace, justice, order — as well as military strength. To survive, to prosper, to preserve our traditions, we need political as well as military allies, trading partners, access to raw materials and supplies of energy. We need freedom of the seas and of international airspace as well as outer space, in addition to a pluralistic environment conducive to national and individual freedom.

Striving for military predominance and stimulating arms races are not the way to satisfy these needs or to uphold our position in the world. We must make every effort to settle the disputes and remove the tensions that could lead to wider conflict and international disorder. We should strive to increase international stability, reduce military competition, encourage peaceful arbitration of international differences, seek arms control agreements and work toward world-wide arms reductions. **The United States is sufficiently strong to lead the world by its example along the path of arms limitations, arms control, reduction of forces, strategic restraint and the furtherance of human rights including the right to live free of wars and fear of nuclear destruction.**

Identifying and defining America's national interests in terms of military policies has become quite complex. The primary national interest is defense of the United States against any attack and the prevention of devastating nuclear war. But most U.S. military forces are designed for conventional war in defense of friendly foreign countries, the fulfillment of commitments to foreign governments and the execution of military plans to defend poorly defined interests by military intervention in areas likely to be logistically or politically beyond American power and resources.

Much of the world's instability and insecurity now calls for vigorous American leadership of multi-national efforts to deal with problems too vast for any single nation. The world includes areas undergoing radical social and political change beyond the control of the more stable powers. American leadership and influence are acceptable by new societies only where we respect their evolution and independence and do not expect their institutions to resemble ours.

There is a growing realization among Americans that U.S. interests will rarely be advanced by military force or covert action against other

nations. Secretary of State Vance has pointed out that the most serious threats to America's vital interests will not be resolved by military power or the conventional diplomacy of the past. Our interests are promoted better by foreign aid, assistance and trade concessions. There is a growing understanding that radically different societies can pursue some common goals and that military intervention or interference by outside powers is politically, socially, and morally unacceptable to most people at home or abroad. The Soviet Union, our strongest competitor for world influence, cannot be powerful everywhere at once — nor can the U.S. The U.S. problem is to maintain a basic military concept that recognizes defense of our national interests, in community with our allies, in terms of military feasibility, political acceptability and the real restraints of increasingly limited resources.

The national interest cannot be separated from the interests of a nation's citizens. No citizens or groups in the superpowers and other nuclear-armed nations desire to be destroyed by nuclear explosions and radioactive fall-out in order to insure their nation's influence or prestige among other nations of the world. The national interest has historically revolved around the maintenance or search for national power and the intentions or desires of national leaders. Professor Hans Morganthau has observed, "How often have statesmen been motivated by their desires to improve the world and ended up making it worse?"

The good intentions and objectives of political leaders do not insure that their policies or strategies will be either praiseworthy or successful. They frequently view any power used to maintain stability or the status quo as being good, in the national interest and a means of controlling the evils of aggression, disorder or change. They fail to see that armed power intended to maintain superiority or dominance over others is always evil and wrong.

Our national strategic programs and goals should be based on a logical and long-term assessment of our requirements according to our national interests, our strategy, our geographic position, and our total strengths — including alliances. They should not be in imitation of the current Soviet posture, effort or force structure.

THE OTHER SIDE

Throughout its history the United States has focused its foreign policies on one or more real or imagined enemies. In our short history the U.S. has fought France, England, Spain, Germany, Italy, Japan, North Korea, China and North Vietnam. Most of these same nations have also been or are now staunch friends or allies. It is the normal nature of most politicians and military leaders to exaggerate the threats from potential enemies that will justify the strategic policies, strong armed forces and the constantly increasing military spending. Ambitions, careers, profits and politics frequently hinge upon fear of war, preparation for war, or the conduct of war. The U.S.S.R. is the current "enemy" threat, the only nation with the capabilities to attack and destroy the U.S. or its allies.

It is the perceived relationship between the U.S. and the Soviet Union as seen by military planners that has been at the root of the growing costs of the military establishments in both countries. The controversies over arms limits and the presence of U.S. military forces in foreign countries, military aid, military alliances and the old but still thriving policy of military containment of communist influence, stem from concern over Soviet objectives and power. Containment of communism was the basis for U.S. intervention in Vietnam, not any direct interest in the welfare of the Vietnamese people.

Communist ideology itself is no longer the main concern of military planners. They now concentrate on the military capabilities and threat by military actions of the communist nations. The threat of monolithic world communism came asunder with the schism between the U.S.S.R. and the People's Republic of China. The Soviet Union now has no major communist friends or allies. It has only minor military clients and its dependents in the Warsaw Pact. The U.S.S.R. is surrounded by, if not a hostile world, a superior coalition of suspicious and heavily armed neighbors. There are no major nations seeking Soviet alliance or domination. The world remains essentially multi-polar; however, nearly all the major military powers and industrialized nations are either allied with the U.S. or expecting U.S. aid and protection.

There is also a significant and growing number of developing countries which are non-aligned and are seeking aid, assistance, arms and a redistribution of the world's riches but who do not desire alliance

with any major power. These Third World nations see the industrial nations spending 30 times more on arms each year than on development aid for the needy. Few of these emerging countries desire to find security and dependence under the hegemony of either the Western world powers or the communist Soviet bloc. The uncommitted Third World nations fear they may become pawns or even battlegrounds in the competition between the United States and the Soviet Union.

New and strengthened democratic institutions and the resurgent pride in nationalism within developing nations have reduced the influence of both the Soviet Union and the United States and hampers their ability to achieve stability in the areas of their national interests. Secretary of State Cyrus Vance has pointed out that, "The world is no longer dominated by traditional power centers . . . We alone cannot dictate events." Much of the world is, however, more inclined toward American leadership, example and assistance, than toward Soviet influence or domination. In fact, Soviet power in terms of international influence has been on the decline in spite of their massive efforts to attain parity in armed power with the nations and alliances that surround them.

Despite recurrent concerns over Soviet-sponsored insurgency, aggression and political upheaval, the power of the U.S.S.R. continues to be limited both in scope and duration. Moscow has never succeeded in coercing Yugoslavia back into the Soviet orbit. Romania has followed an independent policy toward both China and the United States. The Russians have lost all influence over China, the other communist power, and now dedicates some one-quarter to a third of its military effort to defense of the Chinese front. Moscow has intervened in the affairs of an unstable Afghanistan, a nation and an area of little economic or strategic importance which could become a Vietnam-type quagmire for the Soviets. The Russian military footing in South Yemen and Ethiopia is no more certain than was their short-lived presence in Egypt or Somalia. It is unlikely the Soviets can dominate Vietnam because the Vietnamese have historically resisted any foreign presence or domination. Even Cuba is an expensive, dependent client of no strategic power. The Russians stand to experience the same costs and frustrations in any African or South East Asia ventures that were experienced by the U.S. in its Vietnam intervention.

The United States and Soviet Union are the world's two global powers, but there are many other countries and groups able to think and act for themselves — and even ready to resolve their own regional and local problems without great power help. In relative terms, the might of the superpowers has dwindled, and they can no longer readily impose their wills upon others. Their ability to influence people and events with

money, ideology, firepower or military presence is limited. The new reality is that no powers, great, small, or in combination, dominate the world.

But men of influence and aspiration are still led by their habits, their images and their personal biases. The most vocal strategists continue to measure the world balance of power and influence in terms of types and quantities of weaponry. They seek security in numbers and national strength in money spent for firepower. They fuel the arms race with fear, distrust and the assumed worst intentions of the other side. **They don't realize that "superiority" and the position of "number one" are meaningless platitudes in a world of nuclear weapons.**

Perceptions

The term "perceptions" has appeared increasingly in the language of military planners. Essentially it means: that what potential foes, our allies, our own citizens — and the rest of the world — *think* the relative balance between the superpowers is in terms of strength and capabilities is more important than what it *actually* is. This results in the tendency to compare static numbers of similar weapons systems and forces and to seek symmetrical designs of strategies and comparable military spending instead of assessing capabilities to accomplish missions and to attain national objectives with total strengths, forces and weapons. The American habit of exaggerating enemy threats and nurturing fears of the worst possible enemy intentions has also resulted in frequent perceptions of U.S. military inferiority and weakness despite our unequalled total strengths and assets. Negative perceptions of U.S. capabilities cause groundless public concern and over-reaction in the form of excessive forces, weapons and costs.

A major measure of military strength includes those forces that are ready or deployed of adequate size and types necessary to achieve the national objectives. Assessment of relative power must not be limited to only the U.S. and the Soviet Union but must take into account the substantial strengths and contributions of America's allies and friends and the less reliable forces of the Soviet Union's allies.

Forces — The Warsaw Pact

The Warsaw Pact (W.P.) is a multilateral military alliance formed by the "Treaty of Friendship, Mutual Assistance and Cooperation" which was signed in Warsaw on May 14, 1955, by the governments of the Soviet Union, Albania, Bulgaria, Czechoslovakia, East Germany,

Hungary, Poland and Romania; Albania left the Pact in 1968. **The Pact is committed to the defense only of the European territories of the member states.** It includes no agreements on combined operations of aggression, intervention or power projection to foster communist expansion or aggrandizement.

The Soviet allies are organized, equipped and supplied by the Soviet armed forces. They exist under varying degrees of Soviet military occupation and supervision. The Pact allies have little independent military power potential, and their dependability in a Soviet-initiated war of aggression is questionable. There would be no common purpose nor combined national objectives that would justify the risks of nuclear retaliation and their destruction by the Western powers.

The Warsaw Pact nations have populations totalling 370 million people, but they are surrounded by the 958 million hostile Chinese in the People's Republic of China (PRC) to the East and on the West by the advanced industrial nations of the NATO alliance with 570 million people. Another 166 million Japanese, South Korean, Australian and New Zealanders face the Soviets in the Pacific. In the Mideast 130 million Egyptians, Israelis, Saudi Arabians and Iranians could be expected to resist Warsaw Pact aggression.

An important basis of national power and military capability is a nation's economic productivity. The Warsaw Pact nations have a combined Gross National Product (1978) of about $1.4 Trillion. In contrast, the total GNP of NATO nations in 1978 was $4.2 Trillion; Japan had a GNP of $930 Billion and the PRC, about $400 Billion. The productivity and power potential of the surrounding world is vastly superior to the Warsaw Pact.

A Soviet-led attack on the West would challenge the richest and most heavily armed coalition of nations in history. The annual defense spending of NATO is huge. The Warsaw Pact is estimated to have spent some $161 Billion on its armed forces in 1978-79, yet it is exceeded by the military spending of its neighbors and the surrounding world. The U.S. alone spent $122 Billion in that period. The NATO nations all together spent a total of $219 Billion, and other military powers in the world allied or friendly to the U.S. and NATO spent $21 Billions.

Even armed forces in being or in reserve in the surrounding world are superior in comparison to Warsaw Pact forces. The Pact faces not only the 4,360,000 man forces of the People's Republic of China but also 4,754,500 military of the NATO nations with Pact forces totaling 4,763,000. In addition, there are another 2,040,000 military in the nations such as Japan, Israel, South Korea and others allied or friendly to the U.S.

The Soviets and their allies have considerable handicaps of

At a Glance: Military Resources of NATO, Warsaw Pact, & People's Republic of China

	NATO	Warsaw Pact	People's Republic of China
Population	570,300,000	370,700,000	958,000,000
GNP	$4,258 Billion	$1,447.8 Billion	$400 Billion
Military Spending	$219.39 Billion	$161.6 Billion	$40 Billion
Military Manpower	4,754,500	4,763,000*	4,360,000
Strategic Nuclear Weapons	10,000	6,000	200?
Theater Nuclear Weapons	26,000+	15,000+	N.A.
Tanks	28,000	64,250	11,000
Anti-tank Missiles	200,000	N.A.	N.A.
Other Armor Vehicles	53,000+	75,300	1,500
Heavy Artillery	15,000+	23,550+	16,000
Combat Aircraft	9,650+	10,840	5,500
Helicopters	12,200	4,400	400
Major Surface Warships	560+	378	25
Attack Submarines (all types)	217	268	93

Data: Dept. of Defense, IISS, CDI, Dec., 1979

*The U.S. Defense Department estimates of Warsaw Pact manpower includes 750,000 uniformed civilian personnel making the total Warsaw Pact manpower 5.6 Million.

geography and climate affecting their strategic capabilities. Their Far Eastern forces have long and tenuous supply lines. The four Soviet fleets are widely separated and constrained from massing their efforts on major ocean areas by having to pass through straits and narrow waters under control or observation by other sea powers. Their northern forces are hampered by arctic weather much of the year. Three of the five major Soviet naval bases are frozen and blocked by ice in the winter.

In Eastern Europe the Pact forces depend upon limited road nets from Soviet logistic bases and vulnerable rail lines with track gauges that would not mesh with German and central European lines in offensive operations. The increasingly built-up urban areas of central Europe present obstacles to the mobility of Pact mechanized forces, restrict fields of fire and provide potential defense strong points for NATO forces. In terms of terrain alone, any Warsaw Pact aggression against the West would be fraught with obstacles, hazards and high risks.

The Soviets devote large sums to military research and development because their civil economy produces little technology that can be transferred to military use whereas Western technology of broader base and scope contributes to both civilian and military development. Some Western technology the Soviets cannot duplicate at all.

The Warsaw Pact has made steady military improvements in their capabilities during the last 15 years, but they should not be exaggerated in relation to the spending, and force improvements made by the U.S. and its allies. In 1980 the U.S. has begun a major accelerated expansion of its military capability. The Soviets and their allies have not achieved anything that resembles overwhelming military power.

ARMS CONTROL AGREEMENTS

The U.S. and the Soviets have numerous divergent and competitive interests and goals. They also have common interests such as the welfare and progress of their peoples, but above all they have a responsibility for the survival of mankind and avoidance of the disaster of nuclear war.

Both countries are aware that the use or threat to use nuclear weapons is fraught with catastrophic dangers. Nuclear weapons represent the only external threat to the survival of the two superpowers. Responsible national leaders are aware that nuclear weapons could destroy in a few hours the societies, the cultures and the products of centuries of civilizing efforts. **Both the Soviet Union and the United States now maintain forces capable of assured mutual destruction. Additional strategic nuclear weapons delivery vehicles or more powerful warheads will not add to the security of either side nor provide any measure of superiority.**

It is in the national interest of both sides, as well as in the interest of mankind, to actively seek lower levels of nuclear weapons by mutual agreement. Strategic Arms Limitation Talks (SALT) and related negotiations must continue into the indefinite and hazardous future with the goals of freeing humanity from the dangers of nuclear war, diverting the costs of nuclear weaponry to more productive uses and banishing the insane idea that nuclear conflict is a possible solution to men's problems.

William J. Perry, Undersecretary for Research and Engineering, Department of Defense, has stated, "We believe that a stable environment of mutual deterrence can be maintained at substantially lower strategic force levels than are deployed by both sides today. We will continue to seek further arms control agreements which will, in an equitable and verifiable manner, permit such reductions."

Strategic Arms Limitations Treaty (SALT II)

Today, the strategic nuclear forces of the United States and the Soviet Union are basically equivalent, and SALT II preserves that equivalence by establishing equal overall ceilings and a series of equal subceilings on the major types of nuclear weapons.

The U.S. will retain under SALT II a powerful, flexible nuclear force that can, under any circumstances, retaliate and devastate Soviet military, industrial and, if desired, civilian targets. **No possible Soviet gain from attacking our ICBMs would warrant the risk to their society of our retaliation.** We could retaliate with over 4,000 submarine launched hydrogen weapons and our alert bombers. Tens of millions of Americans would be killed by a Soviet first strike, but no President would surrender and not retaliate after such an attack.

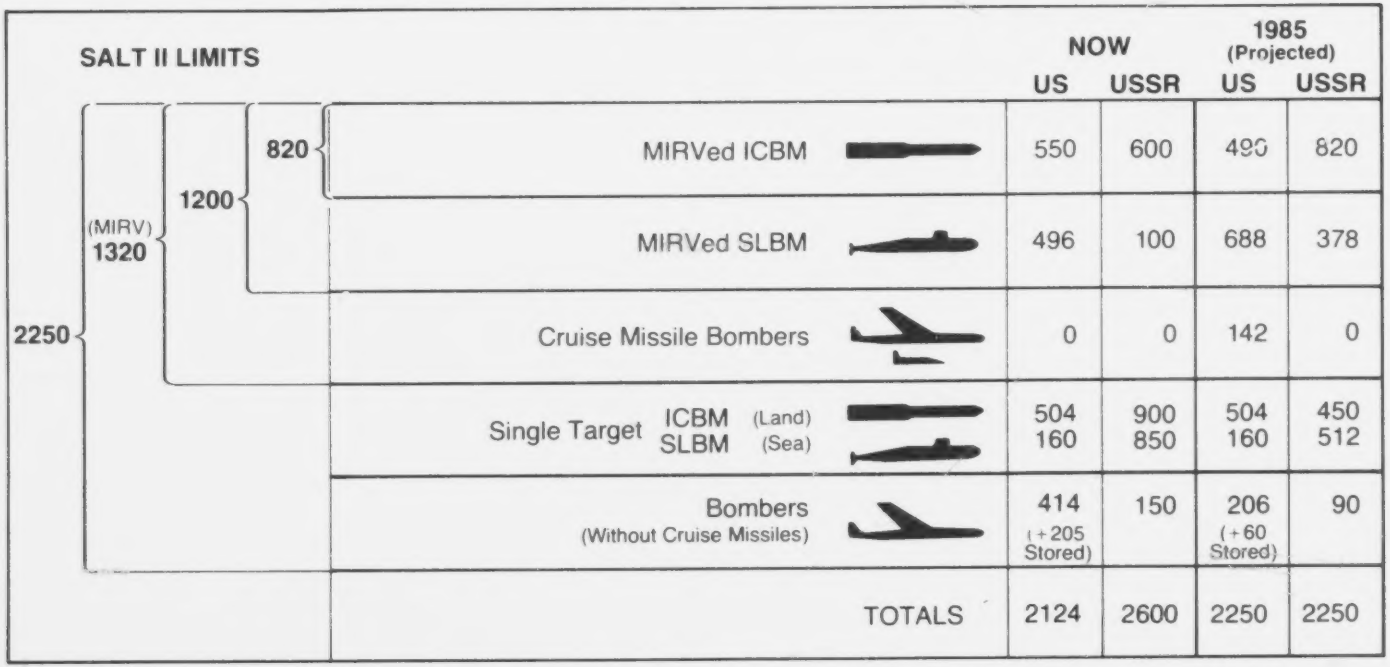
The U.S. has a strong force of ICBMs, bombers and submarines unsurpassed in overall capability by the Soviet Union. Soviet forces are composed largely of fixed land-based ICBMs, which will become increasingly vulnerable in the decade ahead. Our invulnerable submarine missile forces, equipped with more than 5,000 warheads, are being further improved with the addition of Trident submarines and missiles. Our 400 intercontinental bombers, a large fraction of which will soon be equipped with thousands of highly accurate nuclear cruise missiles, are vastly superior to the 150 older bombers of the Soviet Union. Their cruise missile technology is years behind that of the U.S. Our 1,000 solid-fueled ICBMs are smaller and less numerous than their Soviet liquid-fueled counterparts, but the Russians are just now acquiring the guidance technology so essential to accuracy. Such technology was perfected in the U.S. several years ago.

SALT II places many more restrictions on Soviet programs than on U.S. programs and does not require the U.S. either to scrap any deployed weapons or to stop any new weapons development currently planned or even being seriously considered. Under SALT II we can continue with the Trident submarine construction program to upgrade our offensive submarine force. We can also develop and deploy long-range cruise missiles on our bombers, and proceed with the MX ICBM development to whatever extent we may desire.

A nuclear war will be just as suicidal for the nation that launches a first strike as for its victim. Tens or hundreds of millions of casualties and massive industrial damage will be the consequence to both sides. **There is no defense, military or civil, that can protect the majority of our people or those of the Soviet Union in the event of a strategic nuclear attack by the two countries.** Only by preventing a nuclear war can we survive.

The SALT II Treaty contains specific provisions to permit verification of the number of warheads (MIRVs) carried by a given missile since any missile type that has been tested with MIRVs must be considered a MIRVed delivery vehicle even if it is deployed with a single warhead. Every launcher associated with a MIRVed delivery vehicle must also be counted under the ceilings. Our national technical means

Nuclear Weapons Delivery Vehicles Under SALT II



	NOW		1985 (Projected)	
	US	USSR	US	USSR
MIRVed ICBM	550	600	490	820
MIRVed SLBM	496	100	688	378
Cruise Missile Bombers	0	0	142	0
Single Target ICBM (Land)	504	900	504	450
Single Target SLBM (Sea)	160	850	160	512
Bombers (Without Cruise Missiles)	414 (+205 Stored)	150	206 (+60 Stored)	90
TOTALS	2124	2600	2250	2250

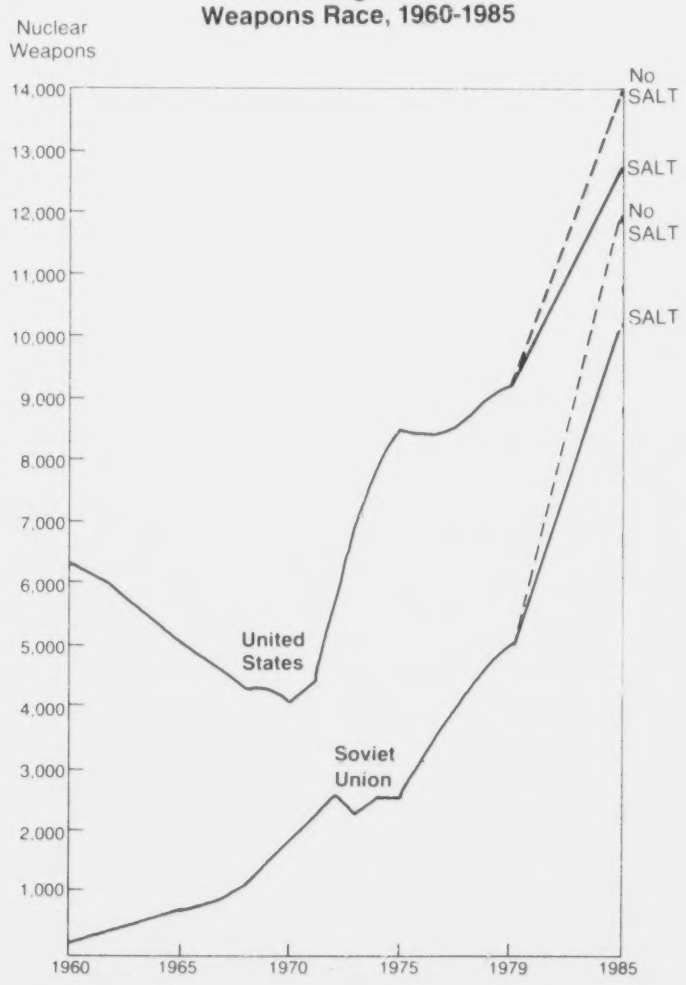
Each side to have no more than 2250 long-range missile launchers and bombers by the end of 1981. Within this ceiling, no more than 820 MIRVed ICBMs, no more than 1200 MIRVed ICBM's and SLBM's combined, and no more than 1320 MIRVed ICBM's, SLBM's, and aircraft with cruise missiles combined. Various combinations are possible.

can by several redundant techniques determine which missiles are tested with MIRVs and how many MIRVs they release.

SALT II is no barrier to U.S. use of nuclear weapons in defending any foreign country. With or without SALT II, the U.S. has the strategic nuclear forces to retaliate and devastate the Soviet military forces and the industry that supports them. None of our programs are constrained by the Treaty, but Soviet levels will be lower with the Treaty. The U.S. and Soviet theater forces are excluded from SALT at the behest of our allies, and SALT II has their complete approval.

Even with SALT II, we will spend Billions of dollars in efforts to improve our bombers, ICBMs and submarines, but the costs of the unrestrained arms race that would follow without SALT II agreements would be massive compared to military spending under SALT II.

The Strategic Nuclear Weapons Race, 1960-1985



MILITARY FORCE COMPARISONS AND MILITARY PLANNING

The Warsaw Pact and the NATO allies, with additional associated nations, have varying and different military goals. Simply counting up tanks, divisions, ships, aircraft or missiles is not an adequate basis for determining the relative effectiveness of competing forces. Successful combat operations, which are the goals of the U.S. and its allies, depend on a great deal more than the perceptions of statistical comparisons.

If U.S. and allied forces are adequate for a specific conflict and can halt or defeat a specific aggressor, then they can be considered a sufficiently credible deterrent regardless of static comparisons of specific force elements. "Essential equivalence" in the total power of opposing weapons systems becomes less meaningful.

Our long-range nuclear weapon force attained credibility as a realistic deterrent to a Soviet attack on the U.S. long ago when they acquired the capability of delivering some 400 to 500 equivalent megatons of nuclear weapons on critical Soviet targets. Such numbers have been accepted by military planners as sufficient to destroy 70 percent of Soviet industry, kill over 100 million Soviet citizens and destroy modern Soviet society. The Soviet leaders in response to this U.S. capability have been driven to create a powerful, long-range nuclear weapons force to deter an attack by the U. S. and to provide a strong basis for negotiation and recognition as an equal nuclear power. The arms race that has resulted from this competition to attain superior forces or even essential equivalence has become a burden to both sides without providing greater security. Paradoxically, the arms race increases the risks of nuclear war and even reduces security. At the same time, no sane leader or responsible government will make any decision or take any action that would result in one enemy nuclear weapon being fired at his country. Just a few nuclear weapon explosions would be a national disaster beyond experience.

The three separate U.S. nuclear forces are dispersed in such a manner that no enemy could eliminate them all under any circumstances. They are reliable, accurate nuclear weapons with yields in excess of that needed to destroy their assigned targets, and we have the command and communications system assuring a high degree of control and guidance. The over 10,000 nuclear warheads and bombs now available to U.S. nuclear delivery systems and containing over 6000 million tons of explosive power are far in excess of any reasonable needs for war. The military balance with the U.S.S.R. is stable despite

any asymmetries in numbers or types of nuclear delivery vehicles which indicate some larger Soviet forces — or larger U.S. forces.

There is no need for U.S. military planners or the National Security Council to be driven by "perceptions" of the military balance based on static indicators or comparative numbers, or for them to seek equality in every measure of military strength across the board. To do so is to waste U.S. and allied resources and to mislead the people whose taxes pay for the costly and excessive weapons systems. There is no need for weapons or force symmetry with the Soviet Union in particular or even the Warsaw Pact in general. The continuing objective should be defense of the United States, avoidance of nuclear war, combined security with our allies and protection of our national interests. Attainment of these objectives does not hinge solely upon national military power or superiority of armed forces.

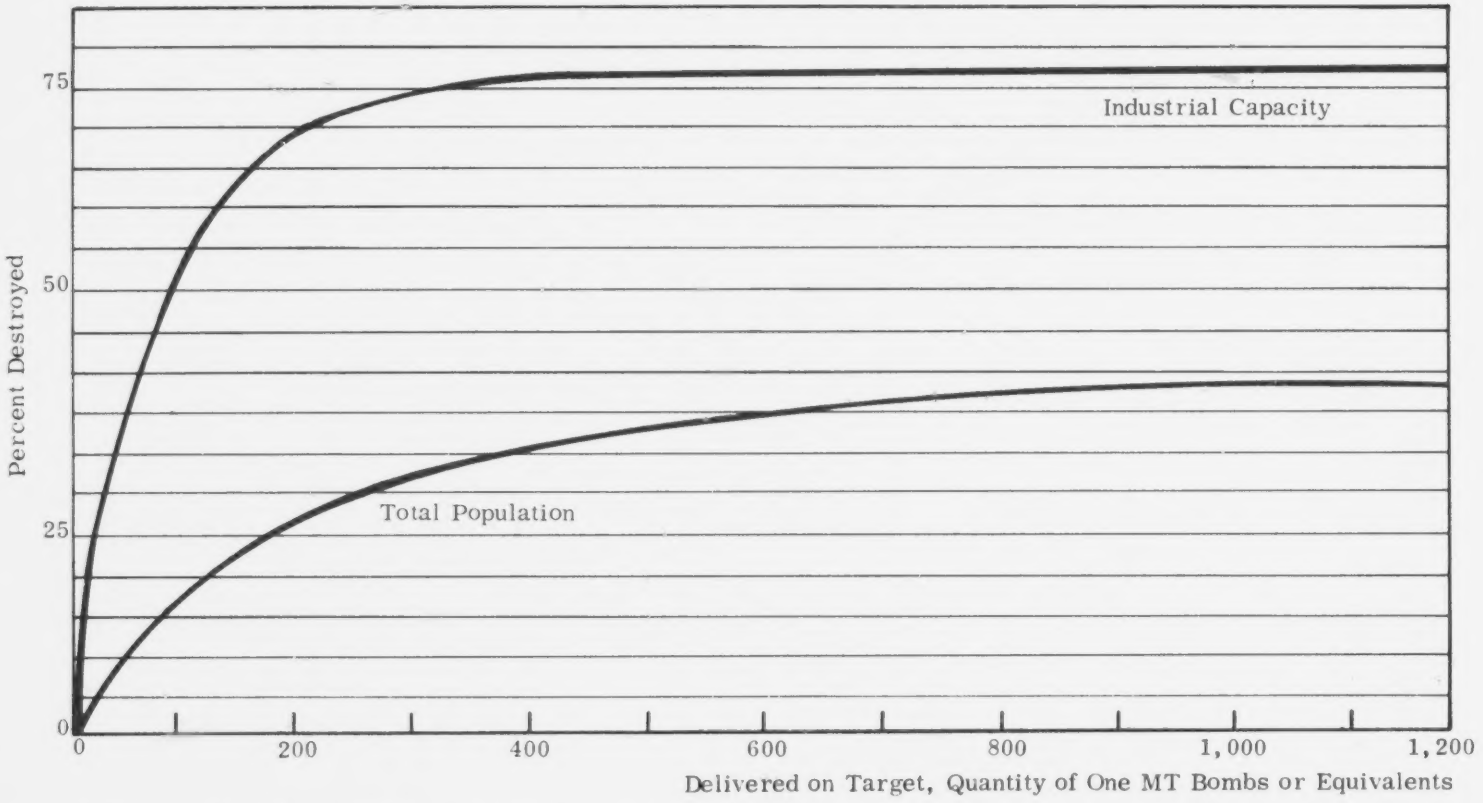
The U.S. has not allowed its military strength to decline in recent years. It has maintained more than adequate modern and powerful forces, despite the diversion of funds, efforts and interest during the Vietnam war years. The power relationship with the Soviet Union has changed to one of general parity because of the massive Soviet efforts to catch up and to become an equal nuclear power.

Soviet spending on defense is not an indicator of possible superiority. The CIA estimate that the Soviets spend 12 to 14 percent of their Gross National Product does not loom so large as it first appears since the Soviet GNP is only half the size of U.S. which is spending 5 to 6 percent of its GNP on military forces and weapons. The military spending of our NATO allies, the Japanese and other allies should also be added to the total. **Concern about possible Soviet superiority in the 1980's is misleading. As long as the two superpowers maintain the capability to destroy each other, there is no other valid measure of superiority.**

Force Requirements

Ready and capable forces prepared to accomplish their missions are the true measures of relative military strength. The basis for determining U.S. force levels are three: (1) adequate forces to retaliate to a Soviet nuclear attack on the U.S.; (2) to defend the United States and our 200 bases in foreign countries from conventional attack; and (3) to have sufficient, modern and effective conventional forces to help defend American interests and friends in foreign countries to the degree and manner desired by the Commander in Chief of the U.S. Armed Forces: the President of the U.S. In the War Powers Act of 1973, the Congress permits the President to send U.S. troops to any country in

Soviet Population and Industrial Capacity Destroyed



Source: Based on extrapolations from Alain Enthoven and Wayne Smith, How Much is Enough? (New York: Harper and Row, 1974).

the world to engage in combat, for a limited period, without declaration of war.

The most demanding commitment that could involve American military forces in large numbers is control of the Atlantic Ocean and defense of Western Europe against a Warsaw Pact attack. We devote some 60 percent of our defense effort to this requirement. **As in our other alliances, conventional coalition warfare calls for most of the burden of ground combat to be carried initially by the Europeans.** The U.S. policy has been to provide air, sea and technical assistance to allies and friends in their regional military efforts. It is only proper that local area forces — air, ground and sea, with their reserves — be mobilized and deployed for their own defense prior to reinforcement and mobilization of additional national forces from North America. However, mobilization and reinforcement of U.S. forces to help defend Europe continue to be necessary so long as the concept of a prolonged conventional war in Europe is deemed possible. Of more immediate concern to war planners for Europe is better allied cooperation: joint planning, rapid mobilization, coordinated command control, realistic logistic procedures, standardization of weapons, and interoperability of air bases and ports.

Of equal importance to America's desire to help its allies is an implied acceptance on the part of allies and friends of the need for reciprocal efforts to aid the U.S. to maintain peace and stability and to project its power into foreign countries when in the common interest. Advance bases, overflight rights, logistic support, combined armed forces and national cooperation for mutual objectives have been lacking from U.S. NATO allies and Japan in times of crises. This requirement for cooperation has a bearing on the size and composition of our own forces for future operations.

For possible limited combat actions in underdeveloped countries requiring only conventional armed forces, the U.S. can choose the time and place of its involvement. We have such a superiority in modern combined arms, firepower and mobility, supported by huge air and naval forces in being, that the requirements for military forces fall well short of our present capabilities.

The concept of a major war in Europe plus a concurrent minor war elsewhere that would also call for substantial U.S. force involvement is based on questionable assumptions and unlikely decisions, and it is doubtful if we could carry out both simultaneously. However, since this is U.S. military policy and the War Powers Act clearly authorizes such actions, the U.S. could be faced in the future with the requirements of a major war in Europe while involved in one or more "minor" wars. The restrictions of the War Powers Act and more deliberate assessment of

U.S. Strategic Forces

Land-Based	Vehicles	Nuclear Weapons In Each	Total Nuclear Weapons	Explosive Force Each Weapon*
Titan	54 Missiles	1	54	9 MT
Minuteman II	450 Missiles	1	450	1-2 MT
Minuteman III	550 Missiles	3	1650	170KT or 350 KT with Mark 12A Reentry Vehicle
Total	1054		2154	
Submarine Launched				
10 Polaris Submarines	160 Missiles	3	480	200 KT
31 Poseidon Submarines	496 Missiles	10	4960	50 KT
Total	656 Missiles		5440	
Strategic Bombers				
B-52 Bombers	350 Bombers	4 bombs	1400	1 MT (=)
		1250 SRAM	1250	200 KT
Total			2650	
			(3424 ALCM — 200 KT beginning in 1981)	
		U.S. Long Range Nuclear Weapons	10,244	

Polaris SLBMS are each armed with three nuclear weapons but can only be used effectively against a single large area target. Because of that factor, the DOD considers them to be one weapon.
Some Poseidon submarines are now armed with Trident I missiles.
SRAM — Short Range Attack Missiles
ALCM — Air Launched Cruise Missiles
The official Pentagon estimate of 9,200 strategic nuclear weapons is conservative. Given the various weapon loads on the U.S. bombers, the total number of U.S. strategic nuclear weapons could be well over 10,000.
*1 MT = 1 million tons TNT equivalence.
1 KT = 1 thousand tons TNT equivalence.

America's vital interests will tend to reduce the likelihood of any such hasty ventures or over-commitments.

When the realities of nuclear war, increasingly restricted fuel supply and changing national relationships are considered, the concept for general purpose forces will be well served by a more modest forward deployment of U.S. general purpose forces in the European Command, a realistic and credible reinforcement capability for that theater and an insistence that our allies carry a larger share of their defense burden. The objective should be reduction in the requirement for large U.S. general purpose forces garrisoned on foreign soil.

Forward deployment of U.S. forces in the Western Pacific Ocean area should consist mainly of air and sea elements. **Hard experience has revealed there is small wisdom and no profit in the projection of U. S. ground combat power or the intervention of military forces onto the mainland of Asia: North East, South East — or Central.** Concurrently, we should be relieved of the $1.1 Billion a year for the stationing of U.S. forces in the defense of Japan.

The defense of the United States does not require the maintenance of over 200 military bases in foreign countries manned by almost one-half million soldiers, sailors and airmen. If military force is required by the U.S., it would be preferable to respond calmly and logically with efficient mobile forces based in the U.S.

Our objective should be: well-trained and armed forces prepared to move quickly by air and sea to areas of threat or crisis, sound command relations, coordinated operations with allies and friends, an ability to mobilize capable reserves, and to support and sustain lines of supply to the area of conflict.

If our strategic nuclear and general purpose forces can attain these objectives, they will be sufficient to counter hostile threats or aggression, and the military balance will be satisfactory. Insuring that the U.S. and its allied forces have and maintain such capabilities is more relevant than whether the Soviet Union is spending more on defense or has more missiles, divisions and tanks.

The Military Posture

The U.S. military forces provide the capability to fight at three levels: with *strategic nuclear weapons,* with *theater nuclear weapons* and with *conventional high explosive weapons.*

A capability to destroy the Soviet Union with nuclear weapons dominates our planning for military forces. However, massive or limited nuclear attacks on the U.S.S.R. or its forces are not the only plans upon which our force levels are based, but the possibility that the

U.S. would respond with a nuclear attack on the U.S.S.R. is a strong deterrent to Soviet aggression and has become central to our war planning.

It is U.S. policy to use nuclear weapons first, if it is judged that their employment would be in the national interest or in the interest of allies. The likelihood of mutual destruction in any nuclear attack and response, however, would negate "the national interest" as a rational objective of nuclear war. Nevertheless, our growing nuclear arsenal and plans for its use make nuclear war a constant reality. Any combat between the U.S. and the U.S.S.R. could quickly escalate to a general nuclear war if any level of nuclear weapons are employed by either side.

The purpose of our theater nuclear forces is to deter or to "win" a war in Europe or to prevent the Soviets from "winning." Yet the concepts and theories for the employment of tactical or theater nuclear weapons are questionable. The deterrent value and effectiveness of limited range and yield nuclear weapons are unknown. Control and limitation of such weapons is only theory. Possible shock and psychological effects on combatants in a nuclear battlefield are conjecture. The probabilities of panic and hasty escalation to massive nuclear attacks on the U.S. and the Soviet Union are great.

The theories of large conventional, non-nuclear forces as means of creating a higher threshold to nuclear warfare assume that the other side will refrain from initial use of nuclear weapons and leave the decision to the defenders. By this logic the enemy aggressor then faces the risk of massive nuclear reaction and destruction. What then is the relative adequacy of non-nuclear forces? Current U.S. planning stresses that the U.S. and its NATO allies must maintain sufficient conventional forces to deter a conventional attack or to win a non-nuclear war. We and our allies are now devoting most of our military efforts and funds for the conventional forces dedicated for war in Europe. The U.S. is spending five times as much on its General Purpose Forces as on its Strategic Forces. The U.S. budget for conventional forces in FY 1981 is $58 Billion.

We Have Credible Options

Critics of current military policy, such as Senator Sam Nunn and Dr. Henry Kissinger, maintain that our current doctrine of retaliation to a Soviet pre-emptive strike against our allegedly vulnerable ICBMs causes our security to depend primarily on the threat to, in turn, "destroy the civilian population of the Soviet Union and is neither credible nor desirable."

The facts are: this is not our only likely nor sole possible response to a Soviet attack; we continue to have other options. However, we do have a real capability, even without adding any new strategic weapons to our arsenal, to attack Soviet population centers with massive nuclear weapons. This remains a credible possibility and is a basic deterrent factor because the Soviets do not know our intentions. However, even after a Soviet attack which could be limited to our military forces, we will also have with our surviving land-based missiles, strategic submarine missiles, and bombers, the option of retaliating only against selected Soviet military targets.

The assumptions that the Soviets could or would be able to launch a massive missile attack against all of our ICBM sites, plus other selected military installations and command posts, within a 30-60 minute period, hit all these targets and not cause large scale U.S. population casualties in the process is simply not realistic.

The Department of Defense once estimated that an attack on U.S. strategic forces, such as contemplated in these scenarios, could cause as many as 10 to 20 million fatalities. Although fewer than the number that might be killed by an attack on urban-industrial centers, these figures hardly represent a "limited attack" and would certainly invite a similar response by any U.S. president.

It should be more clearly understood that large numbers of nuclear weapons directed only at military targets in either country are going to cause widespread and massive civilian casualties from heat, blast, radiation and downwind fallout contamination. Not only is there no defense against nuclear weapons; there is also no way to avoid their effects at considerable distance from the explosion.

Furthermore, no matter what targets or scale of attack the Soviets might initiate, they would be risking massive destruction of their key military, industrial and population targets in our response. No responsible Soviet government is going to take any such action that would bring one or more nuclear weapons explosions on Soviet soil. Of all peoples, the Russians, who suffered 20 million killed in World War II, are not going to risk some 100 million casualties among their people in a nuclear exchange with the U.S.

The central weakness of the theories of U.S. vulnerability to pre-emptive attack or to strategic blackmail by "perceived" superior Soviet power is that the Soviets are equally vulnerable to not only growing U.S. capabilities but also to the total strengths of the NATO allies in addition to the might of the People's Republic of China. The Soviet Union and the Warsaw Pact are surrounded by powerful and heavily armed neighbors, and the preponderance of power remains on the side of the U.S., its allies and its friends.

U.S. STRATEGIC NUCLEAR FORCES

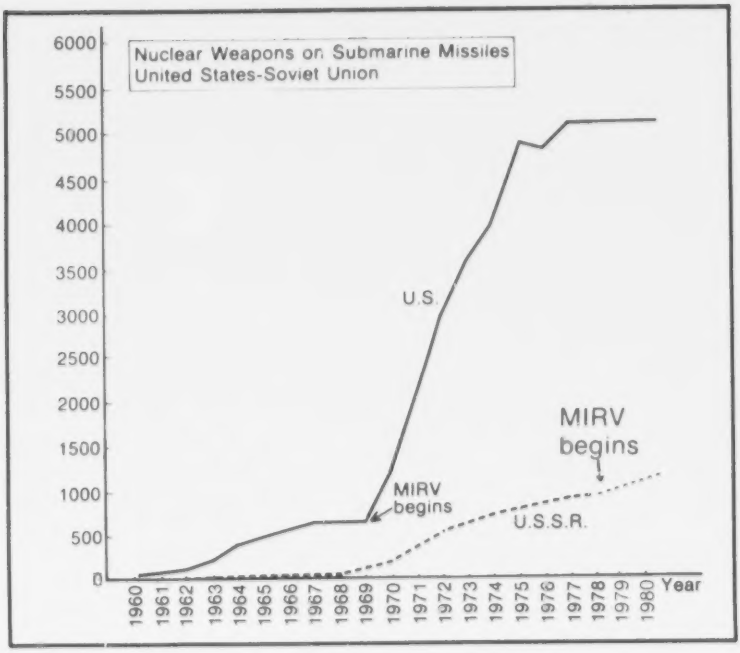
The U.S. strategic bombers, missiles and submarines are designed to survive in adequate numbers and types after a possible surprise attack by the Soviets and to be able to retaliate and penetrate Soviet defenses with enough nuclear bombs and warheads to destroy the military and industrial complex in the U.S.S.R. with a maximum degree of effectiveness. They also clearly have the residual capacity to destroy any missiles remaining in the Soviet Union, as well as Soviet military bases, factories and cities sufficiently to reduce the U.S.S.R. to impotence. U.S. plans call for an adequate reserve of nuclear weapons to complete the destruction of the Soviet Union if it appears necessary to do so. **It is widely recognized, however, that such attacks by the U.S.S.R. and the U.S. would be mutually destructive. There would be no victor and the consequences for mankind would be disastrous.** Nevertheless, at this point in time the U.S. is increasing its strategic nuclear weapons and producing new delivery systems for both a pre-emptive first strike capability and for a retaliatory attack if the Soviets should attack first. In the next decade the U.S. will produce nearly 20,000 more nuclear weapons.

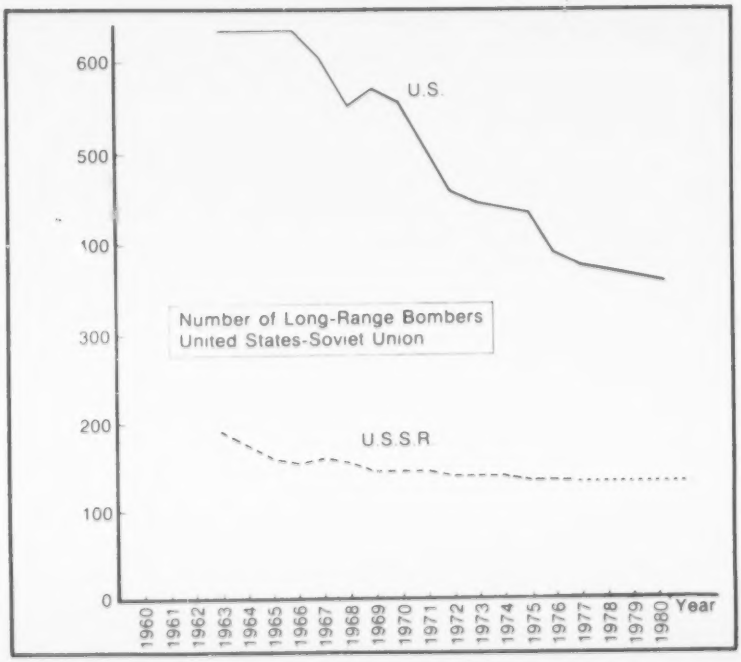
For any war with the Soviet Union about 500 deliverable and accurate bombs and warheads in the 50 to 200 kiloton yield category would be sufficient to destroy most important enemy military and industrial targets. **The U.S., however, has over 10,000 strategic nuclear bombs and warheads, at least a third of which could survive a Soviet "first strike" attack. This is far in excess of its strategic needs.** The U.S. has had and does have a more than adequate number of nuclear weapons and delivery vehicles. Larger, more powerful nuclear forces are neither needed nor desirable. Reasonable modernization of existing systems will be sufficient.

Intercontinental Ballistic Missiles (ICBM)

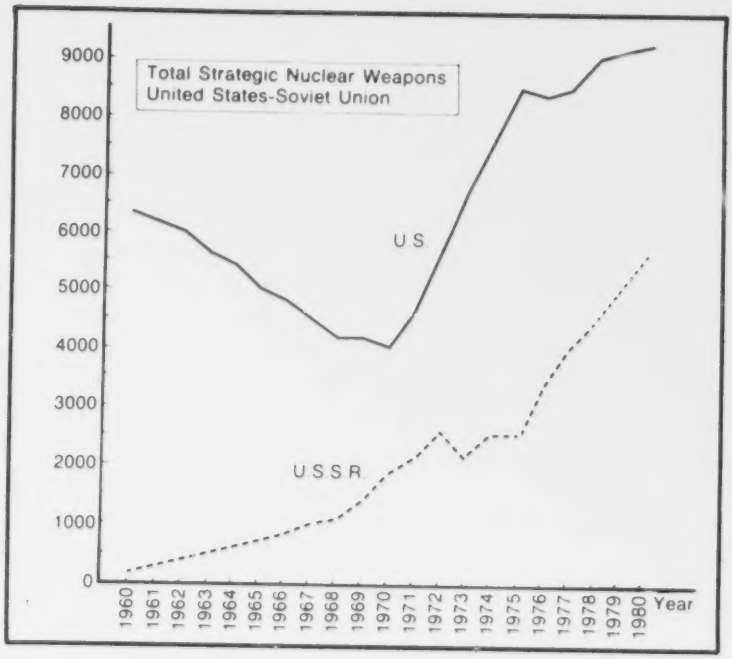
U.S. land-based ICBMS are not now and will not be vulnerable to total destruction by any possible Soviet surprise strike. A massive Soviet missile attack against all U.S. land based missiles in a 30 minute period is technically feasible, but the practical operational problems of

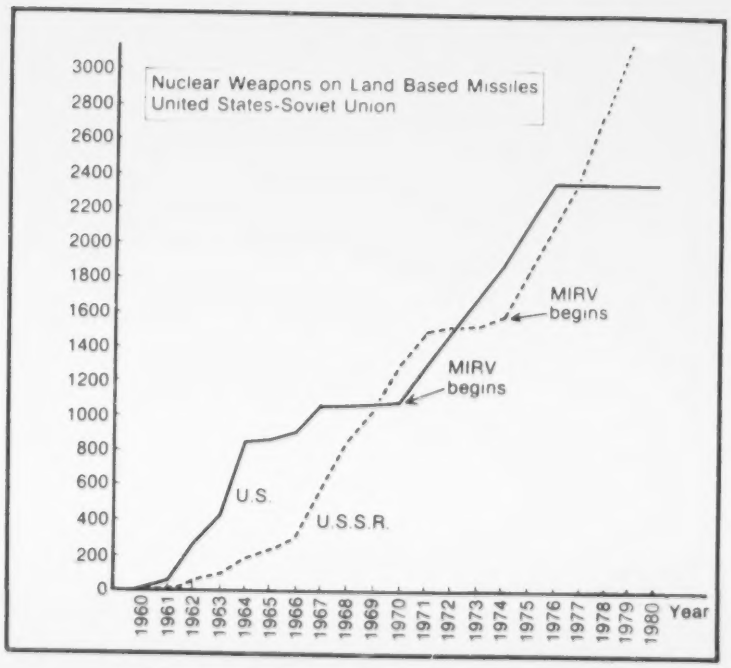
Measures of the Nuclear Arms Race





Measures of the Nuclear Arms Race





destroying all U.S. land-based ICBMs in a near simultaneous surprise attack are nearly insuperable. No missile is 100 percent reliable.

The Soviets will never be certain that the U.S. would not launch its ICBMs on warning of a massive pre-emptive attack or while Soviet missiles are in flight to the U.S. During the 30 minute flight time of Soviet ICBMs, the U.S. missiles can be launched, leaving empty silos for Soviet missiles to hit. This imponderable risk is a basic deterrence to a surprise nuclear attack against our ICBMs. While retaining a substantial retaliatory capability the U.S. should declare that it would not be the first to use nuclear weapons.

The U.S. has been acquiring major new capabilities with its existing ICBMs. There have been extensive improvements in the 550 Minuteman III missiles each with three MIRVed nuclear weapons. The Minuteman III accuracy has been improved with addition of the new NS-20 Guidance System providing accuracy to within 200 yards of the target. On each of 300 Minuteman III the warhead yield has been increased to 1 million pounds of explosive force with the new Mark 12A Reentry Vehicle. These programs have cost $465 million. The Mark 12A warhead plus the NS-20 Guidance System provides each missile with an 80 percent chance of destroying hardened Soviet missile silos. U.S. retaliation to a Soviet pre-emptive attack would find most, if not all, Soviet missile silos empty. If the U.S. plan is to fire its missiles only in retaliation to a Soviet attack, there is no need for the U.S. to proceed with the production and deployment of the very accurate, very powerful new MK 12A warhead. If the U.S. plan is to make a surprise attack against Soviet land-based missiles, then the construction and deployment of the MK 12A warhead is prudent.

The MX ICBM Not Needed

The experimental (MX) ICBM with the "Rube Goldberg" racetrack launching sites and mobile basing concept is not necessary. Some 200 new missiles with as many as 4600 alternate shelters distributed around thousands of square miles of Utah and Nevada will present vast new target areas to attract enemy attack. More Americans will be exposed to catastrophic effects of enemy nuclear explosions. The MX will be difficult to verify and will restrict progress toward future arms control. Deployment of this system will result in an accelerated arms race and cost the taxpayer well over $59 Billion. The racetrack MX ICBM will increase the arms race as the Soviets will probably follow suit. The MX now being developed is so expensive, so complicated, and will be so disruptive to the ecology and economies in the states where it

is to be built that the system is unlikely ever to be completed in its presently planned form.

Even assuming some degree of Soviet success in destroying U.S. ICBMs with a first strike, the U.S. could retaliate with thousands of bombs, air and submarine launched missiles, which would devastate the Soviet Union and its allies. **No possible gain from an attack on the U.S. ICBM force could possibly justify the risks to the U.S.S.R. of our retaliation.**

Submarine Launched Ballistic Missiles (SLBM)

On the average, about 28 of the 41 U.S. missile launching submarines (SSBN) are kept at sea and ready to fire on their assigned targets with up to 3,600 nuclear weapons in the 50-200 KT yield range. The submarines in port are vulnerable to nuclear attack, but with warning many of them can also move quickly to sea. A disarming strike on this SLBM force would require the Soviet Union to detect, identify and destroy most or all of these submarines simultaneously. This is not feasible.

The U.S. is taking measures to preserve the invulnerability of its submarines. The new Trident I missile now being installed on the first of twelve of the Poseidon class submarines, as well as on the new Trident submarine, will extend the range of SLBM from 2500 to 4000 nautical miles, thus greatly expanding the areas of ocean in which they can escape detection.

Today's Poseidon SLBM is as accurate as the older ICBM, the Minuteman II. The new Trident I missile is more accurate. By the late 1980's, the U.S. can deploy Trident II SLBMs with a 6000 mile range that will be as accurate as any ICBMs and will be capable of counter-force destruction of Soviet ICBM silos.

The giant Trident submarines (18,700 tons) being built will add to U.S. nuclear capability and continue the invulnerability of the submarines. Each new submarine will carry 24 Trident I missiles with ranges of 4000 nautical miles each with up to eight hydrogen weapons with 100 kiloton yields. The Trident submarines will eventually replace the older Polaris submarines. The Tridents are programmed for construction of 13 subs at the rate of three every two years. These 13 new submarines will be able to launch some 2496 nuclear weapons, and each sub will cost over $2 Billion.

Trident construction is behind schedule, and there are enormous cost overruns. Congress has provided funds for the study of a less expensive strategic submarine. The planned Trident capabilities are

well beyond our strategic needs, and much of the same capability will be attained by the program to retrofit the new Trident I missile into 12 existing Poseidon submarines. However, the missile submarine is the most survivable of all the U.S. strategic systems so if land-based ICBM forces are ever reduced, the missile subs can assume some ICBM missions. A smaller, less costly submarine deployed in U.S. coastal waters with new longer range missiles and a reduced Trident construction program are options that could be considered.

Strategic Bombers

The U.S. strategic B-52 bombers (350) and the FB-111A medium range bombers (66) are maintained at a high state of readiness. Thirty percent are on alert and with five minutes' notice, nearly 120 bombers and 120 refueling tanker aircraft (KC-135) would become airborne and safe from attack.

The number of weapons carried by a B-52 bomber varies with the mission. Each B-52 G and H model can carry four nuclear gravity bombs in the million ton explosive range plus 20 Short Range Attack Missiles (SRAM). Each SRAM is a missile with a range of 150 miles and a 200 thousand ton yield nuclear warhead. The Air Force has 1,250 SRAM in its 21 B-52 squadrons.

The new Air Launched Cruise Missile (ALCM) under development will be available in 1981 and also will carry a 200 kiloton yield warhead. The range of this weapon is 1,500 miles. It cruises at subsonic speeds and can strike within 100 yards or less of the target. In addition to its bombs, each of some 150 B-52s will be able to carry up to 20 cruise missiles. The Air Force plans to procure 3,424 cruise missiles at a cost of $4.2 Billion.

Our strategic bomber force is undergoing extensive improvements, and there continues to be no need for another expensive, manned penetration bomber. New avionics and new ECM systems will be put in the B-52 H bombers to improve them as effective penetration bombers. The cost for this program was $112 million in FY 1980. The bomber modernization program also includes research and development of a new aircraft to serve as a cruise missile carrier (CMC) which will enhance and possibly replace some older bombers by 1990 when they will be over 30 years old. Wide bodied commercial jet type aircraft may be fitted to carry as many as 60-70 cruise missiles.

Forward Based Systems

In addition to the three major strategic nuclear weapons delivery forces, the U.S. has a very substantial number of aircraft at its bases in Europe, the Western Pacific and at sea that are capable of attacking the U.S.S.R. with nuclear weapons. The twelve Navy aircraft carriers with 500 fighter bombers can attack Soviet bases and cities with nuclear weapons from the Atlantic and Pacific Oceans and the Mediterranean Sea. The U.S. Air Force maintains 556 fighter bomber aircraft which can carry nuclear weapons deep into the Soviet Union, from bases in Japan, Korea, the Philippines, Britain, Germany, Spain and Turkey.

Strategic Capabilities

The U.S. strategic forces are less vulnerable to surprise attack than are the Soviet strategic forces. U.S. submarine missiles and intercontinental bombers remain far superior to those of the Soviets. Although the Soviet strategic forces can deliver more total megatons of explosive power, the U.S. forces have superiority in numbers of nuclear weapons which can be delivered with greater accuracy and hard target kill capability.

Today and for the foreseeable future U.S. submarine and bomber forces could survive a Soviet first strike and be able to destroy the U.S.S.R. in retaliation. Even if the U.S. ICBM forces become increasingly vulnerable in future years, there is nothing to prevent the U.S. from maintaining the capability to completely devastate the U.S.S.R. in a nuclear war.

The Soviets understand that a nuclear weapon delivered by a SLBM, or by a bomber, or a cruise missile explodes with the same effect as one delivered by an ICBM. **Regardless of the vehicle, the number of nuclear weapons that can be delivered on target either constitutes a credible deterrent or it does not.** Nuclear weapons make nuclear war unwinnable and, new more costly U.S. delivery systems will not change this fact.

Worldwide recognition of present U.S. strategic capabilities and powers is based upon the credible and ready forces-in-being prepared to accomplish the strategic missions. **New types and larger numbers of nuclear weapons and vehicles to deliver them will not increase our defense, constitute superiority, or insure victory in nuclear war.**

NEW U.S. STRATEGIC NUCLEAR WEAPONS WILL COST $110 BILLION

($ in Millions)

System	Number Planned	First Year Operation	Through FY 1980	Requested FY 1981	Estimated Total
Minuteman III: Improvements	550	1978	587.7	179	$ 756
Trident I Missile	712	1979	3346.7	855	$ 7,500
Trident Submarine	13	1981	9804.8	1129.4	$29,129
B-52, Offensive and Defensive Modifications	On 359 aircraft	On-going	3625	597.2	$ 4,600+
Air-Launched Cruise Missiles	3424	1981	1473.8	679.5	$ 5,233
MX ICBM	200	1986	1128.8	1551	$59,000
Sea-Launched Cruise Missile	1063	?	1431.4	130.2	$ 2,245
Ground-Launched Cruise Missile	696	?	797.9	67.5	$ 2,069

(The nuclear explosives for U.S. weapons are paid for not from the budget of the Defense Department but from the budget of the Department of Energy. The specific costs of the nuclear warheads for any given weapons system are closely held secrets. In FY 1981 the Carter Administration is requesting a total of $2 Billion for the Department of Energy Weapons Budget.)

OVER A BILLION DOLLARS A YEAR FOR NUCLEAR WEAPONS RESEARCH

($ in Millions)

Program	Through FY 1979	FY '80 Funding	FY 1981 Request
Cruise Missile Carrier Aircraft	$35.6	$30	30
Advanced Strategic Air-Launched Missile	$115	$26	26
B-1 Bomber or follow-on	$3733	$46	46
Strategic Bomber Enhancement	$24.7	142	108
Advanced Ballistic Re-entry Systems	$1970.4	$95	111
Ballistic Missile Defense	$1971.7	$242	266
Anti-Satellite Systems	$118.5	$81	125
Trident II Missile	$30	$26	36
Department of Energy Nuclear Weapons Testing & Research, Strategic and Tactical	(FY 79 only:	$762 $762	851

Obviously, the U.S. has sufficient, survivable strategic nuclear forces to attack the U.S.S.R. under all circumstances. It will not benefit the U.S. to spend more money for unnecessary and redundant nuclear weapons and delivery systems. It is evident that excessive nuclear forces find their function only in deterring and matching the other side's. A continuing build-up of nuclear arms therefore perpetuates the state of disequilibrium between the U.S. and the U.S.S.R. with increasing costs and greater uncertainties.

Secretary of Defense Harold Brown in his FY 1981 Report, states: "At present, there are excellent grounds for confidence in the U.S. strategic deterrent. Our alert bombers, SLBMs on patrol, and a number of our ICBMs could be expected to survive even a well-executed Soviet surprise attack. Several thousands of warheads could be launched in a comprehensive retaliation, and most of the bombers and missiles should be able to penetrate to their targets."

THEATER NUCLEAR FORCES

Theater nuclear forces are the U.S. Army, Navy and Air Force units with the nuclear weapons and delivery systems of generally lesser range and yield than the strategic forces' systems and are intended for enemy targets in the theater such as Europe or Korea, rather than against targets in the Soviet Union or China. These forces are designed to discourage both nuclear or non-nuclear attacks and as an adjunct to our conventional war forces in Europe, and elsewhere. Our theater nuclear forces are mainly organized and deployed for use in the defense of Western Europe and Asia as elements of our war plans.

The U.S. theater nuclear weapons can be employed in response to a Warsaw Pact attack or in an attack initiated by NATO. The imponderable danger of limited use of so-called theater tactical nuclear weapons is the lack of any firm controls or criteria for use. Limited use on battle area targets of even small yield weapons would not be readily distinguishable by the enemy as the "firebreak" between nuclear and conventional war. The normal reaction to "first use" of such weapons would be escalated response in kind. **Controlled escalation of such weapons employment and the risks of massive nuclear response are theory and conjecture.** There is no combat experience for planning or conducting limited nuclear war. Nor is there sound basis for judgment of the physical and pyschological effects of nuclear weapons upon troops in the battle field. It is safe to assume that the consequences would be disorganization and loss of control — plus massive casualties. Nevertheless, both the Warsaw Pact and the NATO allies plan, train and accumulate weapons for theater nuclear war in imitation of each other.

The U.S. has approximately 7,400 nuclear weapons deployed in Germany, the U.K., Turkey and at sea for use in Europe. These are for employment by aircraft, short and medium range ballistic missiles, heavy artillery, surface-to-air missiles, atomic demolition munitions and depth charges at sea. In addition, three Poseidon submarines with ballistic missiles with some 400 nuclear weapons are targeted on Warsaw Pact nations. There are five U.S. aircraft carriers with some 500 nuclear weapons committed to European theater defense.

A large percentage of the U.S. nuclear weapons in Germany and the NATO countries are designed for use by our NATO allies under Programs of Cooperation (POC). These bilateral agreements between the United States and other allied nations involve the transfer of nuclear shells, bombs and missiles for NATO to employ on Warsaw Pact troops and other targets. All nuclear weapons remain in special weapons

depots under U.S. custody until they are released by the President of the United States.

The U.S. Army doctrine for the control and use of theater nuclear weapons involves a request and approval for procedure through the chain of command that requires some 24 hours or more from time of target location until the nuclear weapon is released for firing. During this time all nuclear weapons are maintained in the few vulnerable rear area depots. Their movement to air bases and firing batteries for combat use is a complex and time consuming procedure. Nuclear weapons have limited capability against moving targets of opportunity such as armored forces but are considered appropriate as pre-planned fires upon lines of communication and rear area logistic installations. "Packages" of nuclear weapons to be fired on call are planned by Army field commanders.

"Commanders will make a timely request for approval of a nuclear weapons package, specifying the desired timeframe and firing timespan. To convey to the enemy that we are using nuclear weapons in a limited manner, all weapons in a package should be fired in the shortest possible time. The package must be employed *on time, in the approved areas, on high priority targets.* While not a substitute for strong conventional forces, nuclear weapons provide the commander the capability to generate instantaneous combat power of enormous magnitude that can negate the enemy's offensive advantage and deny him his objective."

Source: U.S. Army FM 100-5, Operations, p. 10-9

Aside from the maintenance and security costs, the military requirement to employ 7,400 nuclear weapons in Central Europe defies common sense. At most, a few hundred nuclear weapons should convince the Warsaw Pact that they would pay a huge price for aggression against the West. A smaller number of weapons could be more realistically dispersed, safeguarded and transported. The efficient command and control of theater nuclear weapons so that they can be employed quickly on appropriate targets is more important than having large stocks of weapons. **The concept that Western Europe can be saved while destroying the Warsaw Pact countryside and people with several thousand nuclear weapons with blast areas of three or more square kilometers each is not logical.** It would be certain to evoke a similar response against West Germany, Britain and France.

Modernizing Theater Nuclear Forces

NATO's theater nuclear forces are closely interlinked with the strategic long-range nuclear capabilities of the U.S. in concept and in organization. The theater nuclear force balance is not an isolated

quantity and must be evaluated in relation to the over-all global and allied balance of nuclear forces.

The basis of deterrence of Warsaw Pact aggression with either conventional forces or limited range theater nuclear weapons continues to be the realistic capabilities of the U.S. and its NATO allies' nuclear forces. The 400 American submarine-launched nuclear weapons assigned for use in Europe continue to make war in Europe unattractive to the Soviets as do the 156 U.S. F-111 medium range fighter-bombers in Europe. In addition, the British have four strategic nuclear submarines with 64 *Polaris* missiles and 54 *Vulcan* medium range nuclear bombers. The French nuclear weapons are another potent deterrent factor in Euorpe. With four strategic nuclear submarines equipped with 64 missiles, 18 land-based 1,875 mile range nuclear missiles and 36 nuclear-armed medium bombers, *Mirage IV*, all of which can reach the U.S.S.R., the French alone could devastate large portions of the U.S.S.R.

In both numbers and quality, the Soviet Union has added to its medium range theater nuclear forces that can strike Western Europe from the U.S.S.R. NATO has deployed fewer medium range theater nuclear weapons than the Soviets since the early 1960's and few new weapons in recent years, but the U.S. is embarking on a major program to replace its nuclear weapons in Europe with an entirely new "generation" of guns, aircraft, and some 572 new missiles.

The Soviet build-up may permit the Warsaw Pact to challenge the NATO defense plans, and it also poses the possibility that the U.S.S.R., having attained rough parity with the U.S. in intercontinental nuclear forces, might attack Western Europe in the erroneous belief that the Soviet homeland would be safe from nuclear retaliation. To correct this perception, the U.S. is fostering additional theater nuclear weapons. These actions and reactions by all parties force the upward spiral of armaments. Actually for many years, U.S. nuclear weapons, carried by missiles in U.S. submarines and in aircraft based in Germany, have been capable of attacking the Russian homeland as an integral part of NATO's war planning and remain a credible deterrent.

Land-based NATO nuclear weapons forces now include: 180 *Pershing*, 450 miles range missiles; 90 *Lance*, 81 mile range missiles; 32 French *Pluton* missiles with 75 mile ranges; and over 786 heavy artillery howitzers capable of firing nuclear shells about 13 miles. Although these weapons do not compare in numbers or ranges to the over 1000 Soviet medium and intermediate range nuclear tipped missiles, they do provide a substantial capability in conjunction with the allies' other medium range and strategic delivery systems. **The destructive power of nuclear weapons, no matter how delivered, remains so devastating that**

NATO AND WARSAW PACT THEATER NUCLEAR WEAPONS

NATO

Aircraft or Missile Launcher Type	Owner	Number	Number of Nuclear Weapons (without reloads)
Long range (Over 600 miles)			
Poseidon Submarine Launched Ballistic Missile (SLBM)	United States	45	400
Polaris SLBM	United Kingdom	64	64
French SLBM	France	64	64
French Intermediate Range Ballistic Missile	France	18	18
Vulcan Bomber	United Kingdom	54	108
F-111 Fighter Bomber	United States	156	312
Carrier Aircraft: A-6	United States	20	20
A-7		40	40
Mirage IV Bomber	France	36	36
Medium range (60 to 600 miles)			
Pershing Ia Ballistic Missile	United States, West Germany	180	403
Lance Ballistic Missile	United States, West Germany, United Kingdom, Belgium, Italy	90	90
Pluton Ballistic Missile	France	32	32
Buccaneer Fighter Bomber	United Kingdom	50	50
F-104 Fighter Bomber	Belgium, Greece, Italy, Netherlands, Turkey, West Germany	367	367
F-4 Fighter Bomber	United States	246	246
Jaguar Fighter Bomber	United Kingdom, France	177	177
Mirage III Fighter Bomber	France	105	105
Short Range (less than 60 miles)			
155 mm and 203 mm Howitzers	United States, West Germany, Italy, Netherlands, Belgium, United Kingdom, Greece, Turkey	786	786

Notes on NATO Weapons:

1. All together, the U.S. has over 7400 nuclear weapons based in Europe, some of which would be delivered by U.S. systems and some by allied systems.
2. It should not be assumed that all nuclear-capable delivery systems will in fact be used to deliver nuclear weapons.
3. The U.S. has additional nuclear-capable aircraft that could be sent as reinforcements to Europe.
4. There are nuclear land mines, air defense missiles, and anti ship and anti submarine nuclear weapons.

WARSAW PACT

Aircraft or Missile Launcher Type	Owner	Number	Number of Nuclear Weapons (without reloads)
Long Range (Over 600 miles)			
SS-20 Intermediate Range Ballistic Missile (IRBM)	U.S.S.R.	120	360
SS-5 IRBM SS-4 Medium Range B.M.	U.S.S.R.	450	450
SS-N-5 Submarine Launched Ballistic Missile	U.S.S.R.	60	60
Backfire Bomber	U.S.S.R.	40	80
Badger Bomber Blinder Bomber	U.S.S.R.	350	350
Medium Range (60 to 600 miles)			
Scaleboard SS-12, Scud B SS-1c, SS-21 missiles, plus short range missiles listed below	U.S.S.R., some Scud B to to East Germany, Romania, Poland, Czechoslovakia, Hungary, Bulgaria	1300	1300
SS-N-4 Submarine Launched Ballistic Missile	U.S.S.R.	18	18
Various Fighter Bombers	U.S.S.R., Poland, East Germany, Czechoslovakia and Hungary.	3500	?
Short Range (under 60 miles)			
Scud A SS1b Ballistic Missile	U.S.S.R., East Germany, Poland, Romania, Czechoslovakia, Hungary, Bulgaria	?	?
FROG 7 Ballistic Missile			
203 mm Howitzer, 240 mm Mortar	U.S.S.R.	?	?

the existing U.S. and Russian theater capabilities constitute a realistic deterrent to aggression.

A new build-up of longer range theater nuclear weapons such as the proposed 108 *Pershing* II, 1,200 mile range ballistic missiles, and 464 new ground launched cruise missiles marks the first time the U.S. will place nuclear missiles in Europe which can attack Soviet cities. It will be comparable to the Soviet employment of nuclear missiles in Cuba to which the U.S. reacted so violently. The 1979 decision of the U.S. to place the Pershing II in Europe did more than anything else to endanger stability and detente in Europe. A sound military rationale for these new longer range missiles in Europe has not so far been produced by the Pentagon. The American taxpayer will bear the estimated $5 Billion cost for the development and production of these new missiles which are of dubious military value for war in Europe.

Advocates of the controversial so-called "neutron bomb," which has more radiation effect than current nuclear weapons, maintain that it will increase the killing efficiency of theater missiles and artillery shells but would do less damage to buildings on the battlefields of East and West Germany. However, its claimed destructiveness against "massive" armor formations is doubtful.

The neutron-enhanced warhead is designed at present for the Lance missile which can attack targets 81 miles away. Firing procedures are too slow to react rapidly against moving targets of opportunity such as tank formations. Furthermore, modern tank units do not mass on the battlefield. They spread out over a large area with distance and interval between tanks to minimize danger from enemy fires. They present poor targets for any weapons except direct fire, anti-tank guns and missiles. Delusions of the effectiveness of the neutron-enhanced warhead increase the likelihood and feasibility of nuclear war in Europe. The "neutron bomb" at best is a costly new weapon of dubious and even counterproductive military value.

Vast areas of ignorance and conjecture typify the theories and plans for employment of nuclear weapons, large, small, clean or dirty. There are no experts on nuclear war or nuclear war-fighting. There is no way of controlling the events or the consequences of nuclear warfare. Disaster for all concerned is a likely result.

The use of nuclear weapons by either side on European battlefields will bring about a comparable enemy response, and while there could be short term military benefits, the final consequence will be the destruction of Central Europe. The ultimate thrust of efforts in both the NATO and the Warsaw Pact should be control and reduction of theater nuclear weapons — not the addition of new families of redundant expensive, and destabilizing missiles.

GENERAL PURPOSE GROUND FORCES

The one million soldiers and marines of the U.S. ground forces and the 626,000 ground force reserves are trained and equipped primarily to defend our allies and to project our power overseas. The many agreements and alliances the U.S. has made over the years are used as the bases for most of our war plans and related justification for forces. None of the agreements or treaties, however, requires the U.S. to station troops in Europe or any other foreign country — or to send military forces to Europe or to any other foreign country in time of peace or even in war. Decisions to station almost half a million men in foreign countries is purely a U.S. decision and not required by any treaty.

Since 1945, with the development of America's world-wide military treaties, U.S. officers and men have been stationed in large numbers in both Europe and Asia. Since the Vietnam War, over 450,000 U.S. military persons have been stationed in foreign countries. Of this number, over 30 percent of the 774,000 man Army and 16 percent of the 185,000 man Marine Corps are permanently based outside the U.S., primarily in West Germany, Japan and South Korea.

U.S. Military Personnel in Foreign Areas
(Figures are Thousands of Personnel)

	End of Fiscal Year					
	1964	1968	1972	1976	1978	1979
Germany	263	225	210	213	234	239
Other Europe	119	66	62	61	61	61
Europe, Afloat	54	23	26	41	35	25
South Korea	63	67	41	39	42	39
Japan and Ryukyus	89	79	64	45	46	46
Other Pacific	27	37	25	27	16	15
Pacific Afloat (Including Southeast Asia)	52	94	51	24	26	22
Thailand	4	48	47	1	—	—
South Vietnam	16	534	47	—	—	—
Miscellaneous Foreign	68	27	22	8	12	11
Total	755	1,200	595	460	472	458

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The structure and deployment of all U.S. ground, naval and air general purpose forces are based on a pre-atomic age strategy that the military defense of the United States depends upon keeping the Soviet Union surrounded with forces in Europe, Korea, Japan and the Philippines. Today U.S. troops in Korea, Japan and the Philippines do not contribute to the defense of the United States. In many ways, the presence of U.S. troops in those countries weakens the defenses of the United States.

Recent U.S. administrations have stressed, however, that our NATO commitments and the security of Western Europe are key elements of U.S. foreign policy. President Carter has reaffirmed U.S. determination to defend West Germany, France, Britain, Italy, Belgium, Denmark, Norway, Greece, Turkey, Iceland and The Netherlands when he said, "The U.S. is prepared to use all the forces necessary for the defense of the NATO area."* Present war plans and policies consider that U.S. and European security are indivisible. The U.S. is totally committed to the defense of Western Europe and devotes a large share of military dollars to the non-nuclear, general purpose forces designed to participate in the NATO alliance defense. U.S. ground forces' doctrine and training are now focused mainly upon combat operations in central Europe with both nuclear and non-nuclear weapons.**

In Defense of Europe

There is a decreasing need to maintain a force of 300,000 American troops permanently stationed in Europe at a huge expense to the U.S. Pay for the American forces in Europe is over $6 Billion each year and is spent primarily in Europe. This outflow of dollars adds to the forces of inflation in the U.S.

Secretary of Defense Brown has stressed that our general purpose forces are planned with the assumption that our NATO allies would provide substantially larger ground and air forces for their initial defense than we contribute ourselves. Senator Nunn has added that we must insist that our NATO allies increase their share of the defense burden. Such comments are justified because the West Germans, French, Dutch and Italians are not making sufficient efforts for their

*President Carter has also reaffirmed the U.S. determination to defend Japan, Korea, Philippines, Taiwan, Australia, New Zealand and other nations.
**See Army Field Manual 100-5 for latest instruction for U.S. ground forces in combat in Europe with both conventional and nuclear weapons.

U.S. GROUND FORCES WORLD-WIDE AT A GLANCE

U.S. Army
Active Duty — 774,000 men in 16 Divs.
Reserve Duty — 592,000 men in 8 Divs.

U.S. Marine Corps
Active Duty — 185,000 men in 3 Divs.
Reserve Duty — 34,000 men in 1 Div.

U.S. Troops Deployed in and near United States

Active Duty — **663,000**
Reservists — **626,000**

U.S. Army	**11 Divisions**
1st Infantry Div. (Mech.)* (1 brigade in W. Germany)	Ft. Riley, Kansas
1st Calvalry Div.	Ft. Hood, Texas
2nd Armored Div.* (1 brigade in W. Germany)	Ft. Hood, Texas
4th Infantry Div. (Mech.)	Ft. Carson, Colorado
5th Infantry Div. (Mech.)	Ft. Polk, Louisiana
7th Infantry Div.	Ft. Ord, California
9th infantry Div.	Ft. Lewis, Washington
24th Infantry Div. (Mech.)	Ft. Stewart, Georgia
25th Infantry Div.	Schofield Barracks, Hawaii
82nd Airborne Div.	Ft. Bragg, N. Carolina
101st Airborne Div. (Airmobile)	Ft. Campbell, Kentucky

Plus 6 Independent Brigades/Regiments
(1 in Alaska)
(1 at the Panama Canal Zone)
(4 in Georgia, Kentucky, & Texas)

U.S. Marine Corps	**2 Divisions**
1st Marine Div.	Camp Pendleton, California
2nd Marine Div.	Camp Lejeune, N. Carolina

Plus 1 Marine Brigade in Hawaii
and 500 Marines at Guantanamo Bay, Cuba

Reserve Forces in the U.S.
National Guard/Army Reserve/Marine Reserve
2 Armored Divs.
1 Mechanized Div.
5 Infantry Divs.
1 Marine Div.
Plus 27 Independent Brigades/Regiments

U.S. Troops Deployed In Western Europe
Active Duty 215,000

U.S. Army	**5 2/3 Divisions**
1st Armored Div.	W. Germany
3rd Armored Div.	W. Germany
3rd Infantry Div. (Mech.)	W. Germany
8th Infantry Div. (Mech.)	W. Germany
1 2/3 Mech. Infantry Divs. of Independent Brigades	W. Germany

U.S. Marine Corps	
1 Marine Amphibious Unit	U.S. 6th Fleet in Mediterranean

U.S. Troops Deployed in East Asia
Active Duty 57,000

U.S. Army	
1 Division	
2nd Infantry Div.	South Korea
U.S. Marine Corps	**1 Division**
3rd Marine Div.	Japan
Plus 1,900 Marines	Philippines

Data: Dept. of Defense, CDI

*These two divisions have duplicate sets of heavy equipment and weapons prepositioned in West Germany.

own defense. They have the direct interests, the economic strengths and the manpower to do more. It is not the obligation of Americans to carry a greater share of the European defense burden than the Europeans themselves will accept.

Preparation for war in Europe is a top priority in the Pentagon. Current NATO programs, such as the Long Term Defense Program, involve: increased standardization of U.S. and allied equipment, improved combat readiness of units on frontlines, increased trained reserve men and women with more rapid mobilization procedures, more aircraft and ships to carry men and weapons from the U.S. and increased U.S. assistance for German, and other European countries' forces.

The Carter administration has approved additional programs to expand the U.S. war-fighting capability in Europe. An additional 16,600 troops have been sent to West Germany from the U.S. More tanks, artillery and other heavy equipment are being stocked in West Germany to outfit three additional Army divisions that would be flown to Europe when war appears imminent. Eventually, it is planned to stockpile duplicate weapons and equipment for six U.S. divisions now based in the U.S. for their use in Europe. Cost to equip each division is over $1 Billion.

Prestocking on such a scale is a costly and risky business. Vast equipment depots and large ammunition dump areas are required. Operation, maintenance and security of storage sites is costly. They are vulnerable targets for early enemy attack in any type war situation. The

NO SHORTAGE OF NATO GROUND FORCES IN CENTRAL EUROPE
Why The Pressure for Quick U.S. Reinforcement?

Armies	Active	Reserves*	Totals
United States	212,300	—	212,300
West Germany	335,200	560,000	895,200
France	326,800	300,000	626,800
United Kingdom	164,000	191,700	355,700
Netherlands	75,000	145,000	220,000
Belgium	62,300	50,000	112,300
Denmark	21,400	102,100	123,500
Canada	3,000	—	3,000
Luxembourg	660	—	660
Totals	1,200,660	1,348,800	2,549,460

*Excludes Reserve manpower not immediately available or intended for home guard duties.

Source: Center for Defense Information

Pentagon estimates the initial costs of duplicate equipment stockpiles will be between $4 to $6 Billion. The plan to build ammunition stocks in Europe to 1.3 million tons will cost $2 to $3 Billion by 1981. In a few years, it will all require replacement as ammunition deteroirates if not used.

The U.S. Army has been increasing its organizations to a total of 16 divisions at an additional cost of $3.45 Billion in 1979. Two more infantry divisions are being mechanized for war in Europe. New military construction, operations and additional vehicles and tanks for these units will cost well over $1.5 Billion.

Moving U.S. Forces to Europe

In order to give credibility to the plans of prepositioning war stocks in Europe, there has to be a substantial air and sea lift capability to move reinforcement troops from their U.S. bases to Europe where they will pick up their equipment. Increasing U.S. military air transport capability to support and move U.S. divisions overseas is a major U.S. effort currently underway.

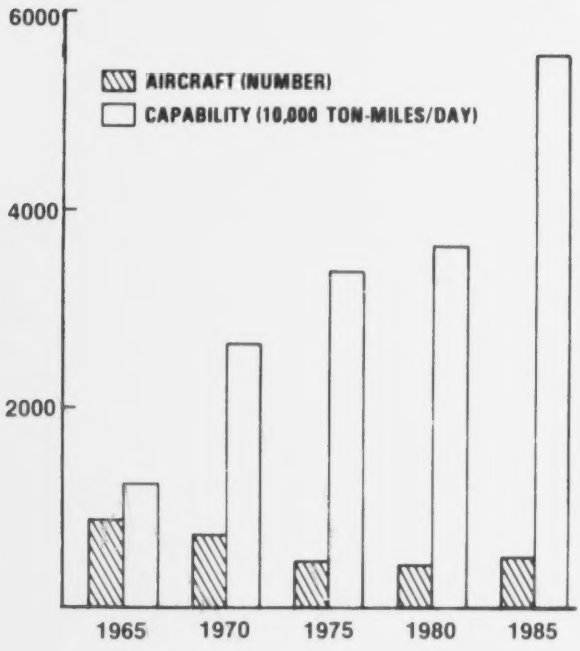
Major projects include: the wing strengthening of the C-5A transport, lengthening the fuselage of the C-141 cargo jet, a new refueling jet tanker, the KC-10A, and improving selected wide-bodied civil airline jets to handle military cargo. These and other airlift projects will cost nearly $4 Billion.

The three U.S. divisions which now have equipment prepositioned in Europe could be moved overseas quickly in the large number of available passenger jets in the Civil Reserve Air Fleet. But additional divisions with their heavy equipment would not arrive in Europe for weeks or months.

The Army estimates it would need over 2 million tons of war supplies and equipment in the first 60 days for a war in Europe. The huge U.S. intercontinental airlift capability with its military and civilian transports capable of moving thousands of troops and up to 6000 tons a day would not be adequate. Even at full capacity the U.S. would be able to airlift only 18 percent of the tonnage needed to sustain forces in Europe in the first two months of war. The balance would have to move by traditional sea transport. Despite this obvious defect in our capability to wage prolonged ground war in Europe, additional ground combat equipment and weapons are being procured at great cost.

The present United States air and sea lift force is large, modern and expensive to operate. In 1979, the U.S. spent over $1.8 Billion to maintain its military transport for both ships and aircraft. The military

TOTAL LONG RANGE AIRLIFT INVENTORY AND CAPABILITY



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mobility forces include 76 C-5 aircraft, 280 C-141 aircraft, 373 designated commercial passenger and cargo aircraft, and about 550 merchant ships, 27 Military Sealift ships, 152 National Defense Reserve Fleet vessels and the largest amphibious attack fleet in the world with 66 ships including ten assault helicopter aircraft carriers. At best, however, these planes and ships are not all available or ready to operate in a concentrated effort; they are spread over four oceans and world-wide. They would require weeks to assemble and commence moving U.S. forces across the Atlantic. Getting to a conventional, non-nuclear battlefield during the early weeks of an enemy blitzkrieg attack would be difficult because there are not enough transport aircraft and ships readily available to carry sufficient reinforcement and reserve divisions to Europe in time to substantially affect the outcome of battle. Even current plans to move elements of five U.S. divisions in a 10-day period to their pre-positioned equipment while under possible enemy fire probably could not be carried out.

This is not a problem that would be resolved, however, by the procurement of additional air transport aircraft or troop ships. There are practical limits to the number of troops and tons of supplies which can be processed through U.S. and European air fields and ports in a given amount of time during a war or even during a crisis.

The logical and most secure reinforcement assembly areas, airfields and ports of entry should be in France with lines of supply going East to the forward combat zone in West Germany. Such an arrangement does not now exist. Reinforcement air bases, ports of entry, pre-positioned equipment and lines of supply are all in West Germany and the North European channel ports and are vulnerable to early enemy attack.

The problem of feasible early build-up of NATO forces in an emergency cannot be resolved by more air and sea lift capacity for men coming from the U.S. The logical solution is to plan for priority mobilization and deployment of European NATO reserves, men who live in the areas. They total some 1,348,800 and can more quickly move to defense positions. Activation and deployment of 560,000 West German reserves, 300,000 French reserves, 145,000 Dutch reserves and 191,700 United Kingdom reserves could be accomplished more rapidly than assembling and transporting some 150,000 U.S. based reinforcements thousands of miles by air and sea.

The NATO: Its Strength and Readiness

The U.S. has been spending about 60 percent of its defense budgets for the defense of Europe. In FY 1979 the U.S. devoted some $50 Billion to directly support its NATO commmitment. Our NATO allies are spending about 85 Billion. The alliance has agreed to increase these amounts 3 percent for the next 10-15 years, but it is doubtful these rates will be met or sustained.

NATO armed forces are huge, modern and stronger than ever. Since 1971 NATO has increased its tank strength 42 percent, added over 200,000 new wire guided anti-tank missiles, 25 percent more armored personnel carriers and 10 percent more artillery. The new NATO weapons represent a large variety of the most advanced technical developments. The former chairman of NATO's Military Committee, Admiral Sir Peter Hill Norton, Royal Navy (Ret.), has claimed that "NATO forces are sufficiently well-equipped and close to the battle front to carry out deterrence."

$77 Billion a Year by 1983 to Support NATO?

The Economic Reality of the Carter Policy of 3 Percent "Real Growth" in U.S. Spending for NATO (3% Real Growth + 6% Inflation = 9%) (in Billions)

Data: CDI estimate

Costly Modernization

The Army's modernization programs to improve its European war-fighting capability includes a wide variety of new equipment that has been under development in recent years. Currently, the Army has in production or development 18 different missile and artillery projects, 10 armored vehicle programs and 6 helicopter and light aircraft projects. New munitions stocks being procured will cost over $40 Billion.

The Army plans to buy over 7,000 new XM-1 main battle tanks at a cost of nearly $1,500,000 each. The Army seeks to attain a total of over 17,000 modern battle tanks, well over the number needed for its armored and mechanized units, plus its war reserve. Where or how this number of tanks could be moved overseas for war is not clear.

By 1984 the Carter administration estimates the modern Army will need $42 Billion for new equipment — an increase of 47 percent. The Marine Corps' spending will grow by about a third to around $4.6 Billion, but even these massive increases will not be enough funds to buy all the weapons each service wants. The cost to maintain these complex machines has not been calculated, but it will be extremely high.

Too Many Divisions

The number of divisions and the size of the U.S. ground forces have not been determined by purely military requirements but to a large degree by inter-service politics. There is constant competition for roles, missions and commands that will justify forces, doctrines, weapons systems and annual new equipment requirements. The Marines' minimum active force of three divisions and three air wings was established by law as a result of pressure by Marine supporters. The Army's active force of 16 divisions is also largely the product of successful Congressional lobbying. Where will these divisions be needed, in what kind of war? How will they be moved to combat for a short war? Is a long war involving 19 active divisions plus a mobilized 9 reserve divisions a likely concept?

The simple, hard reality is there are too many ground divisions to maintain at a wartime readiness. It makes little sense to maintain 19 active and 9 reserve divisions if only a third are ready for war at any given time. Pruning unneeded units could save nearly $11 Billion over the next five years and even more in future years.

THE CARTER GROUND FORCES PROGRAM COSTS

Programs	Estimated Costs
3 Additional Army Divisions	$3.45 Billion*
2 New Mechanized Infantry Divisions	$1.5 Billion*
3 New Division Sets of Equipment in Europe	$2 to $4 Billion*
More War Reserve Stocks	$2 to $3 Billion*
Strategic Airlift Program	$4 Billion
New Weapons Procurement	$30 Billion**

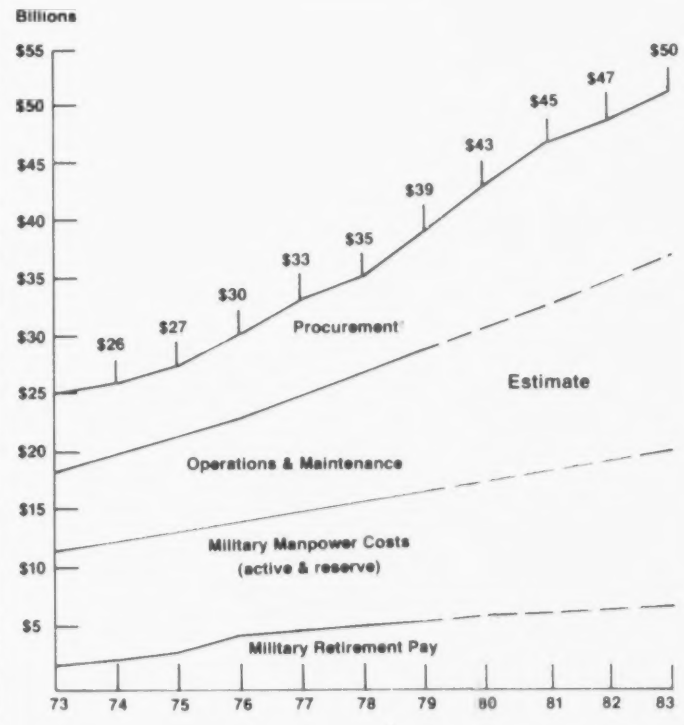
DATA: Dept. of Defense, GAO, CBO, CDI

*Cost estimates for 5 year periods, not total program costs.

**Total new procurement will run over $40 Billion for programs currently underway. Some of the new procurement estimates are buried in other categories.

RUNNING TO STAY IN PLACE
Ground Forces Budget Trends, 1973-1983

The number of U.S. soldiers and Marines has remained constant since 1973, but the cost to maintain them is up by 60 percent. The increase will be 100 percent by 1983.



*Includes R&D and construction costs
Data: Dept. of Defense, OMB, AFJ, CDI

Reducing Ground Forces

The three Army divisions (5th, 7th and 24th) added under the 1975 Army force expansion plan sap the strength of the total force. These three units are the most heavily dependent upon the reserves for combat and support troops. It is very unlikely these divisions would be up to strength and ready in time for a war in Europe. The Congressional Budget Office (CBO) estimates $6.3 Billion could be saved over the next five years if these units are phased out. The men and equipment from the divisions should be reassigned to other units to improve their combat

readiness. This move would also save on procurement costs since the 24th Division is planned to be converted to mechanized infantry status.

If the 2nd Infantry Division is ever removed from South Korea, it also is to be converted to mechanized infantry. As with the three divisions of the 1975 expansion plan, it is questionable whether a NATO oriented, mechanized 2nd Infantry Division could be deployed to Europe in time to be effective in the event of a war. If this division were deleted from the active force structure, the five year cost savings would be about $1.28 Billion according to a CBO estimate. Reducing the active Army to 12 divisions, well trained and equipped, could save $7.5 Billion in the next five years.

The U.S. Marine Corps is in an ambivalent position. As structured, the Marines would not be effective for war in Central Europe because they lack necessary vehicles, tanks and armored personnel carriers. If they were mechanized, they would become just additional "heavy" Army type divisions and would limit their ability to be quickly deployed elsewhere. The Marines should be reserved for non-European conflicts. The limited manpower availability of the 1980's and 1990's and the increases in weapon costs will make it increasingly difficult to maintain three full strength Marine divisions. The Marine Corps should be trimmed to six active balanced amphibious brigades (present divisions total 9 brigade equivalents), and smaller air wings. A full strength three division/three air wing Marine Corps is not necessary in peacetime. This action will bring the Corps into line with its limited combat role and is more compatible with the U.S. Navy's amphibious lift capacity which is now capable of transporting about four amphibious brigades. The yearly cost savings estimate for maintaining three reduced strength divisions and air wings is roughly $630 million or about $3.15 Billion over a five-year period.

Maintaining division size reserve units is not practical in an era of nuclear weapons. The United States no longer has the luxury of time to mobilize, train and deploy the National Guard and the Army and Marine Reserve divisions as during the First and Second World Wars and the Korean War. However, some capability for reinforcing the active forces should be maintained for the remote possibility of a prolonged conventional war.

The crisis of increasing Army-Marine weapons costs must be faced head-on. There are too many very expensive weapon systems being bought at the same time. There is not enough money to pay for all these different programs. A number of the new weapons are of marginal utility and are excessively costly. The $7 million Advanced Attack Helicopter is one weapon which could be eliminated. Trimming unnecessary programs will help, but the major saving will be made by

cutting the active force down to 12 well-equipped, full strength Army divisions.

The basic problem of the U.S. ground forces is that the U.S. has more combat divisions than it can maintain at a reasonable level of readiness at an acceptable cost and with a feasible intercontinental mobility for rapid employment.

Military Personnel

The military has been able to meet annual recruitment goals for the services without a draft, but the real problem has been keeping the good volunteer men in service. Between 30 and 38 percent of the first term enlistees fail to complete their enlistment period as most are processed out by the service that recruited them. Among recruits without high school degrees, the discharge rate is over 50 percent which indicates the military services need to do a better job of screening applicants. This high attrition rate occurs because the recruits do not meet service standards. Also, maintaining the Army divisions in Europe and keeping the early reinforcement units up to strength are done at the expense of the remaining active, regular units in the U.S.

Starting in the 1980's, there will be a decline in the U.S. population age group of 18-24 year-old males, and recruiting for ground forces will become more difficult. Efforts to recruit more males and females to maintain present ground force personnel levels may not provide enough volunteers for 28 combat divisions and their supporting combat arms units. New complex and costly weapons require more educated and well-trained men to maintain and operate them than in the recent past. The Army may have to mothball its new anti-tank helicopters because of a shortage of 1000 Army helicopter pilots.

The major flaw in the ground reserve plans in addition to their declining strength situation is the time it would take for the Army and Marine reserves to mobilize for deployment in Europe. At best, they can mobilize only a small percentage of the force needed. The reserves continue to consist of partially trained men and numerous equipment deficiencies. Current war plans calling for mobilization and deployment of reserve units in one to six months are not realistic, and it is doubtful that the huge costs of the reserves are worth the money spent to maintain them. Most reserve divisions in the past have required at least a year to mobilize, train and deploy overseas.

Solutions to acquiring and keeping people in the ground forces will

be to make some reduction in forces, reduce strength requirements, raise recruiting standards, increase pay scales and continually strive to make military service more attractive. An alternative is revival of the draft and selective service, but conscription will remain unacceptable to most young Americans.

Military Dependents Overseas

If the Pentagon is serious about the combat readiness of the European based troops, it would bring the 221,000 wives and children of American soldiers home. The large numbers of dependents adversely affect readiness for war and bring into question the adequacy of evacuation plans. **If a threat from the Soviet Union developed in a manner allowing time for the orderly evacuation of the troops' dependents as the Pentagon maintains, then there would be ample time to move these same troops from U.S. bases to Europe in a crisis.** Provision of housing, schools and transportation for military dependents adds nearly $1 Billion to the costs of our NATO deployment. All of the Pentagon's arguments for keeping dependents in Europe add to the logic of reducing U.S. force levels in Europe.

The NATO Strategy

Since no nation wants to employ nuclear weapons in Europe and none have complete confidence in conventional weapons, NATO planners conceived the absurd strategy of "flexible response" which means they really do not know what to do. "Flexible response" makes it possible for military planners to request ever more conventional weapons as well as additional nuclear weapons at the same time. This concept assumes the Soviets would initiate conventional war operations and leave the decision to use tactical or strategic nuclear weapons to the NATO defenders. This is not only unsound but also unlikely as Soviet-announced doctrine has long accepted theater nuclear weapons as being appropriate for either attack or defense. It is logical then to conclude that limited nuclear fires on the battlefield would quickly escalate to mid-range and then strategic weapons employment. The mutual destruction of all combatants would result, and there would be no victory, no winner, and aggression would not prove worth the risk and cost.

It is the likely destruction and cost from nuclear retaliation that continues to be the realistic deterrent to war in Europe. There are no objectives whose value can possibly justify the price of nuclear war. It is this reality that reduces the need for large, conventional forces on either

side. The military security of Western Europe is insured not so much by the presence of a large number of American ground forces but rather by the U.S. commitment and the U.S. capability for nuclear war.

By eliminating the ambivalence of our current posture of preparation for prolonged conventional war and emphasizing our commitment to furnishing a realistic nuclear shield for deterrence of war in Europe, there will be less acceptance of the conventional war concept with the endless urge to increase conventional arms and forces on both sides.

The fact that any nuclear war would lead to mutual destruction makes war avoidance the only logical strategy. Continued maintenance of peace through negotiations, with the objectives of arms limitation and force reductions, is the only sensible choice left to Western Civilization, and neither neutron bombs, medium range missiles, theater nuclear weapons nor more American divisions will alter this reality.

GENERAL PURPOSE NAVAL FORCES

The U.S. Navy has only one possible opponent for control of the seas in wartime: the large and modern Soviet Navy. **But the U.S. Navy is at present by far the largest in number of men and tonnage, is the most powerful, most modern, most combat experienced, has the most aircraft, best submarines, and has seven times as many naval bases in the world.** It also enjoys the additional strength provided by the major allied navies of Great Britain, France, Germany, Italy, Japan, Australia and New Zealand. The total forces of the assorted friendly and independent nations' navies far surpass the actual capabilities of the Warsaw Pact naval forces.

Soviet naval forces must also cope with very awkward geographic operating conditions. Three of the five major naval bases of the Soviets freeze up in the winter. Soviet naval vessels have long distances and hazardous passages to travel in order to reach the West's main sea routes. They have had to divide their forces into four fleets with remote and restricted bases. Their fleets can be bottled up at such narrow seas as the Skagerrak the Dardanelles, Gibraltar and the Sea of Japan. The Greenland-Iceland-U.K. gap can be observed constantly, and access to the North Atlantic would be restricted. They would have difficulty massing and supporting major task forces in prolonged operations in both the Atlantic and Pacific.

The U.S. Navy fleets' primary missions are to *project power* ashore and to *control the seas.* In projecting power against undeveloped countries, they could do so with ease, but projecting power by aircraft carrier strikes with non-nuclear weapons against the U.S.S.R. would encounter stiff opposition. Most naval officers agree the Navy would not be very successful on its mission of protection of sea lanes and sea control except in limited areas because too little of the Navy's efforts have been put into *anti-submarine warfare.* The U.S. Navy's *anti-air* fighter capabilities, however, remain unsurpassed. Minor contingencies and show of force operations are well within the capabilities of the large, modern and highly mobile U.S. naval forces. The U.S. Navy has never had the divine mission to control all of the ocean seas at once, but it has remained and is a dominant force for peace and more than balances any possible hostile naval power.

The Ship Strength of the United States Navy as of September, 1980

Attack Aircraft Carriers	13
Guided Missile Cruisers	26
Destroyers*	100
Frigates	72
Nuclear Ballistic Missile Submarines	37
Nuclear-powered Attack Submarines	76
Diesel-powered Attack Submarines	5
Amphibious Attack Ships*	66
Minesweepers*	25
Guided Missile Patrol Boats	3
Support/Logistical Ships (All Types)*	104
Grand Total:	527**

*Includes active Naval Reserve Force ships

U.S. Navy Ship Construction

	FY 1981 Proposed Shipbuilding Program
Trident Ballistic Missile Submarines	1
Nuclear Attack Submarines	1
Nuclear Guided Missile Cruiser	2
Guided Missile Frigates	4
Amphibious Ship	1
Support and Logistical Ships (All Types)	8
Total Ships	17
Total Cost	$6,118,000,000

**In addition, there are 83 ships authorized and under construction but which will not be delivered prior to the end of FY 1980.

The U.S. naval forces consist of 527 warships including: 13 large attack aircraft carriers, 10 amphibious attack helicopter carriers, 198 cruisers, destroyers and frigates, and 76 nuclear powered attack submarines. There are 12 attack carrier air wings, 24 land based patrol squadrons and approximately 4,000 naval aircraft. There are three Marine divisions and supporting air wings. The U.S. Navy has the most far-reaching and modern advanced base system with its organic and efficient base Construction Battalions.

Under normal peacetime conditions about 30 percent of the active operating force is in foreign waters ready for war. This practice, ancient with precedence, has limited value in these times. It also increases cruising time, accelerates ship wear and fuel consumption, as well as adding to crew-family separation problems. The display of "American military presence and resolve" as an effective element of foreign policy and forward strategy has become an outmoded myth more than a current reality. The old days of intimidation by warships lying close off

shore in areas of conflict and instability seem to have passed. The natives and insurgents of Vietnam were never impressed or influenced by the presence of the great Seventh Fleet which dominated the South China Seas for eight years. Revolutionaries of Iran have been unaffected by a carrier battle group cruising the Gulf of Oman. The presence of three aircraft carriers and a large number of U.S. ships in the Arabian Sea did not deter the Soviet invasion of Afghanistan. Show of force over-flights by carrier aircraft are unlikely to impress the people of a troubled country — even if they can identify the fast, high flying jets. The fighter bomber aircraft on the attack carriers have combat ranges of 5-700 miles which limit their capabilities in areas such as the Persian Gulf. Recent experience has shown that the presence and pressure of U.S. Naval forces are as likely to coalesce opposition forces and invite reactions against the friendly governments as they are to help the encumbent powers.

Carrier and amphibious forces deployed to forward areas are the most flexible and ready type of power to project ashore in certain limited operations. Quick or hasty reaction to crisis situations by rapid deployment and intervention with such U.S. armed forces is now permitted, despite the intention of Congress, by the War Powers Act for the first time in our history. The use of these forces for purely punitive measures, however, is of dubious value. Recent events have revealed that rapid reaction with military forces may be less effective than patience, restraint and negotiation.

An additional 40 percent of the active naval forces, also operationally ready, is assigned to fleets based in U.S. ports ready on short notice for war operations to any ocean area of the world. The remaining 30 percent of the fleet is in reduced operational status, undergoing planned maintenance and conducting basic training. In times of crises, these additional fleet units can normally be sent to sea within a few weeks.

What Kind of Navy?

As large, costly and superior as the U.S. Navy is, it continues to suffer from a schizophrenic insecurity concerning its proper role, missions, nature and size. Naval leaders seem to worry more about numbers of Soviet naval vessels than about the nature and purpose of U.S. ships. They neglect to include the total forces strength of our allied navies in assessing relative strengths . The Navy strives to keep all old naval functions and ship types alive despite the realities of new weapons' capabilities. The U.S. Navy is in danger of being sunk by its own

prejudices and traditions, and this may not be unique to the U.S. Navy.

It desires more ships of all types and received 17 percent of the FY 80 defense procurement funds for its ship construction. In 1979 some 108 ships were under construction at a cost of $40 Billion. Yet there is no assurance that the Navy can procure sufficient qualified personnel to properly man and maintain its highly technical new ships. The Navy continues to be unable to retain its highly skilled, non-commissioned officers at middle grade level. New technical equipment demands more skilled personnel, longer maintenance hours and more frequent sea duty tours for those qualified. People — not funds — promise to be the Navy's biggest problem.

Apparently in a quandry about the future missions of the Navy, Secretary of Defense Harold Brown has noted, "We are in the process of resolving a number of difficult issues about the exact future direction the Navy should take in its shipbuilding program and in exploiting its capabilities. None of those issues, I should add, have brought into question the importance of the Navy, or the desirability of having it perform its traditional missions within the guidelines of national strategy."

The real threat to the future effectiveness of all naval forces, regardless of ship types or quanitity, is the increasing range and destructiveness of land based aircraft and missiles with precision guidance. They put naval forces under continuous high threat once within range and could deny the seas to task forces attempting to project

June 1979 Overseas Deployments

	Western Pacific	Mediter-ranean	Eastern Atlantic	Mideast
Aircraft Carriers	2	2	0	0
Surface Combatant Ships	19	12	4	4*
Attack Submarines	7	5	3	0
Mobile Logistics Support Ships	10**	9**	0	1
Amphibious Ships	9	5	0	1
Land-Based ASW Squadrons	4	1.5	2.5	0

*This represents a two-ship increase over the previous peacetime levels. For the time being, the additional two ships have been drawn from the Sixth Fleet in the Mediterranean.

**Includes Naval Fleet Auxiliary Force Ships.

Sec. Defense Harold Brown
Dept. of Defense Annual Report FY1981

power into enemy home waters. The new weapons technologies appear to be favoring sea denial rather than sea control and pose difficult problems to planners striving to determine appropriate new ship types and tactics.

Despite its problems, the U.S. Navy and its allies have distinct advantages over Soviet sea forces. To be effective, the Soviet fleets would have to leave the protection of their home waters. Even if they could survive the dangerous passages to the high seas, their surface combatants could probably not operate long enough far from their bases to inflict prolonged damage of any significance.

Because of its new construction rate in the 1960's and 1970's, the Soviet Navy faces block obsolescence in coming years. Aside from ballistic missile submarines, in recent years Soviet naval shipbuilding has fallen behind that of the United States. Soviet distant sea deployments have also decreased.

The U.S. Navy is rapidly improving its anti-ship cruise missile capability; destroyer and frigate force levels are rising and looking toward improved programs in mine warfare and anti-aircraft defenses. In the final analysis, *no* U.S. naval leader would trade U.S. seapower and its basic advantages for Soviet naval capabilities.

Amphibious Forces

The seizure and defense of advance bases on defended enemy ground or the projection of combat power into the perimeter of the Communist World by amphibious assault operations is a desirable strategic capability but in today's world is an unlikely requirement and of dubious feasibility in the high threat areas on the NATO flanks.

Before amphibious task forces could approach the narrow and dangerous waters on either the northern or southern flanks of the Warsaw Pact in the European theater, there would have to be friendly control of the air and sea in the areas. The air and sea battles for domination of such areas would be so violent and destructive with the modern forces now on both sides, they would probably quickly evolve into nuclear war. The consequences would preclude the need or feasibility of amphibious invasions in the European theater.

By the same token, amphibious attacks for the projection of U.S. combat power into the Asiatic mainland are at present not considered politically acceptable or needed. A more likely use of ready U.S. Fleet Marine Forces would be the early and rapid establishment or reinforcement of critical advance bases such as Iceland, the Azores,

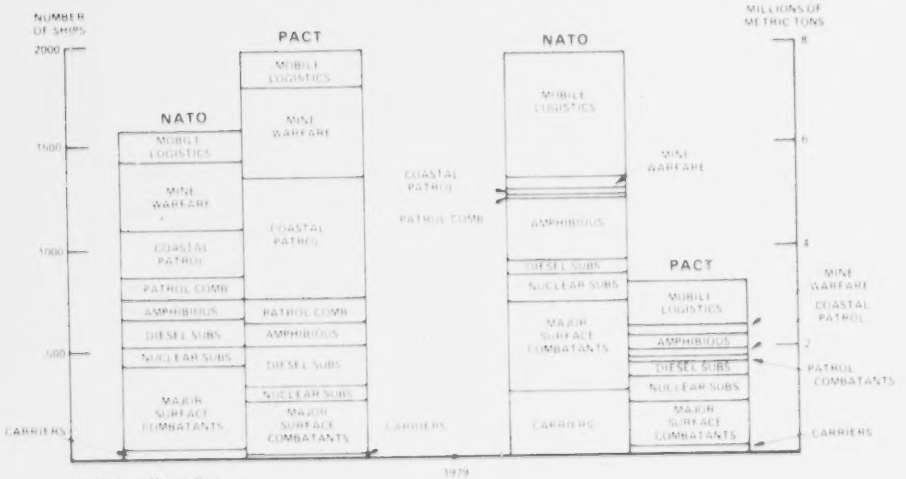
Cyprus, Israel, South Africa or bases in the Indian Ocean or Western Pacific. These would not be amphibious assaults but rather rapid deployments of balanced air-ground teams to forward areas in a contingency situation. So for these relatively more limited missions, the Fleet Marine Forces with their modern amphibious shipping (the largest amphibious force capability in the world) are quite adequate.

Objectives for FY 1981-1985

To ensure that the Navy will be capable of countering potential threats in the coming years, the following key objectives have been indicated in the five-year defense program for General Purpose Naval Forces:

- Improving fleet air defense capabilities;
- Improving anti-submarine warfare capabilities;
- Maintaining worldwide presence and crisis management forces;
- Improving fleet balance and weapons modernization;
- Improving fleet readiness.

GENERAL PURPOSE NAVAL FORCES OF NATO AND THE WARSAW PACT



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GENERAL PURPOSE AIR FORCES

The U.S. tactical air forces (TACAIR), consisting mostly of jet fighters and attack bombers, are the most modern, mobile, experienced and skilled of all the world's air forces. They are also the most expensive.

They consist of 26 U.S. Air Force tactical fighter wings with 2,599 combat ready aircraft, 12 Navy carrier air wings with 1,111 combat aircraft, 53 anti-submarine warfare squadrons with 635 combat aircraft, and three Marine air wings with 478 combat aircraft for a total of 4,823 first line, very modern, ready combat planes. In addition, air reserve forces, which are the most ready and mobile of all U.S. reserves, consists of: 889 Air Force and Air National Guard reserve fighter aircraft, 138 naval anti-submarine aircraft, 139 Navy reserve fighters, and Marine reserves with 110 aircraft for a total of 1,279 ready tactical air reserve aircraft. Within a few days over 6,000 modern tactical aircraft can be mobilized and commence deployment to critical areas world-wide. Current plans are to deploy major tactical air units from the United States to Europe if war is imminent. Specifically, U.S. war plans calls for a 30 percent increase in the number of tactical fighter squadrons in the first 10 days of war in Europe.

There are now eight U.S. Tactical Air Force wings based in Europe or 28 tactical air squadrons with some 650 of the most modern aircraft in the world. In addition, 5 more squadrons of 100 fully ready combat aircraft in the U.S. are standing by in a high state of alert for a flight to Europe. By 1983, U.S. plans call for flying 60 tactical air squadrons with 1440 aircraft to Europe in one week if war is imminent. The major restriction on such rapid build-up of combat aircraft in Europe is the availability of air bases with adequate maintenance, spare parts, jet fuel, and ammunition to keep aircraft in combat. Difficult though it is, the massive rapid transfer of U.S. tactical aircraft to Europe is the most feasible of the current NATO reinforcement plans.

Missions and Effectiveness

The missions of tactical aviation include controlling friendly airspace and supporting land and sea forces in the execution of their missions. This has been the doctrinal purpose of tactical aviation since

TACTICAL AIR FORCES

Total U.S., NATO and Pacific Allies — 10,976

U.S. Total Tactical Combat Aircraft

6,099	
Air Force*	3,488
Navy*	2,023
Marines*	588

*Includes Reserve Aircraft

NATO Tactical Combat Aircraft

3,445	
Germany	610
England	540
France	600
Belgium	150
Holland	190
Norway	120
Denmark	110
Italy	310
Greece	260
Turkey	320
Canada	210
Portugal	25

Pacific Allies Tactical Combat Aircraft

1,190	
Japan	500
South Korea	250
Australia	140
New Zealand	35
Philippines	85
Thailand	180

Data: Department of Defense and IISS

World War II, but the Vietnam experience resulted in conflicting views on the command, control, employment and effectiveness of general purpose air forces.

The massive, modern and concentrated U.S. air arms delivered more bombs and gunfire on targets in both North and South Vietnam than in any previous war, yet the results were not decisive and were considered by many to be unproductive and even counterproductive. In South Vietnam, U.S. aircraft were normally unopposed by enemy aircraft but faced heavy anti-air fire over North Vietnam. The U.S. lost 1,646 fixed wing jets in combat and 2,098 in accidents during the Vietnam war.

Air attacks in the rural and undeveloped areas of Vietnam proved to be mostly a waste of effort, aircraft and pilots, and the haphazard damage inflicted largely on the country and people being defended caused much public revulsion against the war in South Vietnam, the U.S., and in many other nations. **Tactical air forces have proved to be of limited value in limited wars such as fought in undeveloped countries like Korea and Vietnam.**

Any future contingencies of similar nature will probably again reveal the limitations of high speed sophisticated jet aircraft in either influencing the ground battle or providing decisive interdiction of enemy resources. Since the advent of the high speed jet aircraft, pilots have had difficulty locating ground targets as well as hitting them with conventional bombs and missiles.

But tactical air forces are riding the crest of their own waves of technological developments, new aircraft types and the pressures of the aerospace industries. The air forces of the two superpowers are designed and structured to outperform each other in that possible great contest and battle for air superiority in the skies over Central Europe. There is no other arena or reason that can justify the new U.S. aircraft now costing $15 to $30 million apiece. But no offense or defense in the European theater can hope to succeed unless it includes domination of the air over the battlefield. In contrast to undeveloped and more primitive battle areas, the highly technical, mechanized and roadbound ground forces in Europe would need tactical air support and protection.

Because of the basic inaccuracy of high speed jet attack bombing, many aircraft with many bombs are now necessary to provide the desired firepower effectiveness in high technology combat. These ground attack aircraft also require defense from enemy aircraft so there is a concurrent need for numerous air-to-air fighter aircraft escorts. Air combat doctrine also has maintained that air superiority in a sophisticated war is gained by: a prolonged battle of attrition against enemy aerospace factories, by attacking enemy air forces on the ground

and defeating them in the air while at the same time successfully defending the friendly airspace. Such missions, however, do not appear to fit the theories of a short, violent war in the European theater. Air superiority may be attained in a few days with tactical nuclear weapons. Violent air battles may be limited to a prelude period in advance of nuclear exchanges that would destroy all air bases. Close support air forces may be depleted in a short time by the new families of surface-to-air missiles as previewed in Vietnam and in the Yom Kippur War of 1973. The nature, extent and effectiveness of tactical air operations in the European theater remain matters of conjecture.

Trends and Developments

A number of new developments are apparent:

- Air bases for jet combat aircraft are becoming larger, more complex and more vulnerable to attack.
- New satellite, electronic, surveillance and control systems make both concealment and surprise difficult for air operations.
- The new family of "smart bombs", i.e., precision guided and controlled bombs (PGM), increases the effectiveness of each aircraft and reduces the need for large numbers of aircraft and bombs to destroy a given target.
- Airborne electronics can now find targets at night and poor visibility.
- All low flying attack type aircraft have become increasingly vulnerable to relatively low cost, surface-to-air missiles and to radar controlled anti-aircraft gunfire.

The tactical airforces are the most professional, ready and mobile of the U.S. general purpose forces. The active and reserve pilots represent the finest type of dedicated and courageous American fighting man. America has more combat experienced military and naval pilots than the rest of the world combined. The conduct and courage of American pilots while captives in North Vietnam, was exemplary and in the highest traditions of military service. The fact that there is a current exodus of experienced military and naval pilots from the active ranks into the more attractive air lines industry is a serious matter for national concern.

In addition to skilled and experience pilots and airmen, the U.S. tactical air forces are equipped with the finest, most costly combat aircraft available, and new improved aircraft are being purchased in large numbers each year: 1977 – 550 new tactical aircraft were

purchased; in 1978—677; in 1979—421; and in FY 1980 — 433 new aircraft; for a total of 2,081 new combat aircraft in four years. Some 347 new aircraft are proposed in the FY 1981 budget.

Costs of TACAIR

Tactical air power has become the single most expensive component of the military budget. Its share of military spending is larger than that of strategic, ground, or naval surface forces. Two-thirds of the entire costs of the entire U.S. Marine Corps is spent to maintain its tactical air component. The cost of jet aircraft being purchased in 1980 and 1981 has increased by a factor of four in *real* terms over those aircraft purchased in the 1960's. As a result, the quantitites of more modern aircraft that can be procured each year is reduced. In an attempt to avoid being priced out of business by high unit costs, the services have turned to a new breed of lightweight fighters: the F-16, the F-18 and such specialized close support aircraft as the A-10. Procurement of lower cost alternatives such as the F-18 and F-16 permits a continuous flow of the latest aircraft into the services at an acceptable pace for the near future. The Navy's planned F-18 is hoped eventually to be a lower cost supplement to the expensive F-14. Limited numbers of high cost, high technology aircraft such as the Navy's F-14, at $29.3 million each, and the Air Force F-15, at $24.9 million each, also continue to be purchased.

The U.S. is spending vast sums of money to maintain the most modern tactical air force in the world: $8.4 Billion in the FY80 budget, with the main mission of being able to fight and survive in the skies of Northern and Central Europe where some 4,200 Warsaw Pact combat aircraft face 4,180 NATO* active and fully ready reserve aircraft.

*Includes 600 French and 1,000 U.S. reinforcements.

Modernization

U.S. tactical air forces would use complicated, highly sophisticated weapons to attack Soviet aircraft, Soviet defensive systems and Soviet ground forces. The character of a war today or in the near future in Europe will be considerably different from that experienced by most U.S. veteran combat pilots in Vietnam and Korea. A major question is whether the U.S. air forces are being properly structured and equipped for the mission. The U.S. approach to an air war in Europe has evolved

toward a system based upon centralized, real-time command and control, sophisticated destruction of enemy defense systems, and precision-guided munitions. The European allies, on the other hand, maintain that this highly technical approach is unduly costly, too vulnerable to countermeasures and is based upon an incorrect assessment of the needs and nature of armored-mechanized ground warfare.

In order to modernize and improve the tactical air forces' ability to carry out their missions of air superiority, interdiction and destruction of enemy defense systems in an intense combat area, there are a number of major U.S. initiatives underway. We are increasing our ability to keep a large number of aircraft flying during protracted combat periods. New weapons systems to offset any numerical disadvantages with enemy air forces in a particular area are being developed. Devices to allow operations at night or in adverse weather are being improved. Improved means to suppress enemy air defense capabilities are being acquired. There is improved effectiveness of air to surface weapons and tactics to increase flight time over the target. We are upgrading the defense of air fields and aircraft carriers in order to survive massive air attacks. Most importantly, the TACAIR forces are improving kill probabilities with air-to-air missiles.

A fundamental difficulty in modernizing any force is determining what changes are absolutely necessary and which are only marginal. Some of our NATO allies argue that no one has thoroughly analyzed the *interaction* of tactical air forces and the ground forces they support. They maintain that large spending on air modernization may not be warranted if it subtracts from the funds available for ground and surface forces or reduces the number of aircraft available because of costly new aircraft. Modernization costs may actually result in reductions in total air combat capability.

The current programs for not only U.S. TACAIR modernization but also improvement in all of the NATO allied air forces and tactical air forces do, however, promise greater kill and destruction capabilities in the near future. New aircraft invariably include more effective weapons and better electronics. Much emphasis is being focused on attacking and stopping armored forces and destruction of men and material attempting to support armored forces. Precision-guided weapons, cluster munitions and electronic warfare equipment are some of the wide variety of systems being purchased.

Problem Areas

There are significant differences of views on tactical air roles, missions and command relations. Each U.S. service has created its air force independently of the others, emphasizing its own operating environment and supposedly unique capabilities. The tactical air effort is weakened because of the common desire of the services to equip themselves for *independent*, instead of *mutually supporting* missions. At one extreme is the Marine Corps, with its own TACAIR in a self-contained air-ground team. The Army's large number of helicopter gunships is justified under the rubric of "direct fire support" instead of close air support — an Air Force mission. And the Navy's case for its TACAIR assumes independent carrier operations without assistance from other forces.

Long-standing conventional wisdom has held that defeating enemy air forces is the priority air mission which calls for concentration of air power and unified command. Only when the air battle is won and air superiority assured, could TACAIR turn to close support battlefield strikes and attacks deep into enemy territory. Most U.S. tactical fighter-bombers are still designed with these considerations in mind and for offensive operations rather than air defense.

But the 1973 war in the Middle East showed the tactical fighter to be extremely vulnerable to cheap, defensive missiles. Less than 5 percent of Israeli fighter losses resulted from air-to-air combat; 95 percent were credited to the array of Soviet-made ground-to-air missiles in the hands of Egyptian and Syrian troops.

Despite their overwhelming numerical superiority, Air Force and Navy fighters over North Vietnam achieved only a 2.5 to 1 kill advantage in air-to-air combat compared to the 14 to 1 ratio achieved in the Korean War. Most air losses in Vietnam were caused by anti-air gunfire and missiles.

These lessons raise questions on the kind of aircraft needed for the future, particularly in Europe. Warsaw Pact *integrated* air defenses are now seen as formidable barriers to European air superiority and to strikes against targets deep behind the battlefield as is their ability to inflict very high losses on penetrating fighters. In net terms, **Soviet-style air defense may be more efficient than our offensive aircraft** and may contain them very close to the battlefield.

At stake in our tactical air program are not just their high costs, but what the money buys in the way of adequate forces. Fundamental to that question are the service doctrines that place high premiums on independent air operations and on aircraft designed for missions they are not likely to fly or to survive.

The record does not support service claims of improved management in their aircraft procurement. Long-standing problems remain unchecked, and corrosive dollar increases continue to afflict all major acquisition programs. The Secretary of Defense's "design-to-cost" directive to the services has failed, and their lack of cost discipline means higher military budgets in the years ahead. Most seriously affected will be the TACAIR force structure itself, which may have neither the right kinds or numbers of tactical fighters needed for a good balance among them.

The Congressional role is hampered by a plane-by-plane approach that is long on technological explanations but short on matching Defense Department goals with equipment needs. Congress and the Secretary of Defense urgently need to look at TACAIR on a mission basis.

There is little doubt about the skill, mobility and readiness of the U.S. tactical air forces, but considering our allies' strong and ready air forces, there is reason to review the actual need for so many U.S. planes and squadrons. Some 416 active and reserve fixed wing combat squadrons in the three U.S. services appear to be excessive and an extravagant cost. The huge quantities of jet fuel consumed by these units in training will have to be balanced against the immediate and more productive fuel requirements of business and the airline industry. The feasibility of deploying, supplying and operating so many aircraft in a violent and destructive conventional war in Europe is questionable. In a nuclear war between the superpowers, large, general purpose air forces would be irrelevant. So the question remains: "How many U.S. tactical air forces and aircraft are actually needed and can be afforded?"

OTHER REGIONAL REQUIREMENTS

The continuing desire on the part of the U.S. to defend Germany, England, France and other European nations creates the single most demanding requirement for large, capable general purposes forces. It is the basis for the one "big war" the U.S. is planning to fight. The idea of preparation for a "half war" or limited war in some non-European theater is the basis of planning and requirements for forces not acquired for the defense of Europe.

Since World War II, the most serious international problems have not been in Europe but in other less important areas. The U.S. National Security Council and the military planners have taken a direct interest in the activities, conflicts and disorders in foreign countries world-wide. The chief emphasis of U.S. foreign policy is to maintain international stability and to prevent the spread of Soviet and communist influence. The primary means to accomplish this has been and continues to be the military power of the U.S. **This policy persists in spite of the lessons of Vietnam which clearly demonstrated the limits of U.S. military power in resolving the conflicts and problems of remote, underdeveloped or emerging nations.**

War, rebellion and terrorism are a way of life in much of the Third World. Even in some richer nations, religious, political and economic disorder nurtures bloodshed. Many of these nations, rich or poor, are arming themselves to the teeth. Some are aligning themselves against the economic interests of the major developed nations. U.S. and allied policymakers should focus their foreign policies not just in negative anti-communism and the preservation of the status quo, but in more positive terms that will help poor countries to improve their condition, in hopes of creating a more favorable environment for mutually beneficial, long-term relationships. Application of military force has been and probably will continue to be counter-productive in influencing developing nations.

Asia and Korea

Their security, stability and the freedom of access by air and sea to our trading partners, friends and allies in the Pacific Ocean areas are of constant concern to the U.S. strategic planners. The security of our

forward deployed armed forces in the Western Pacific is also vital to our national interest. However, the ancient rivalries and discords among some Asian nations are not of direct strategic or economic importance to the U. S. **The projection of American power onto the Asian mainland and warfare against Asian peoples have not proven to be in the national interest.** Insofar as the mainland of Asia is concerned, the U.S. should have learned the limits of interventionism and the merits of essentially an air and sea strategy in the defense of its interests in the Pacific area.

After over 30 years of occupation, defense and garrison of the Republic of Korea (ROK), a few U.S. forces have been withdrawn. During the 1950's what began as a United Nations defense of South Korea became an American dominated ROK-U.S. combined command. Since the Korean war, the U.S. has provided South Korea with massive military and economic assistance of over $38 Billion.

South Korea, under control of Korean military officers, has been transformed into a modern state of impressive economic and military dimensions. With an armed force of 500,000 men, it no longer requires the presence of U.S. armed forces. The large, tough ROK army of 20 divisions, reserves of 1,100,000 men and Air Force of 254 modern combat aircraft supported by a productive and expanding economic base are capable of defeating North Korea with the aid of air and naval support from the U.S. The South Koreans are ready and able to defend their own country.

Assuming a strong defense by South Korean ground forces, and a commitment of U.S. naval and tactical air power, the North Koreans could not be assured of achieving decisive results in any aggression against the South .As the U.S. withdraws, the Koreans appear to be taking steps to resolve their differences and solve their own problems.

The mutual defense treaty between the U.S. and Korea will be maintained, but there is no need to continue the presence of U.S. ground forces on the mainland of Asia. The withdrawal of the remaining elements of the U.S. 2nd Infantry Division should proceed expeditiously. Korean officers should assume responsibility for their own defense, and a Korean general should be in command of his own nation's defenses instead of a U.S. general.

The U.S. has borne the burden and defense of the North East Asia region for 30 years. It is now time to reconsider the role and responsibility of Japan in that area. Japan now has one of the largest economies in the world in real terms and is a major trading partner of the U.S. **Japan is also a major world power with its own interests in peace and the security of Korea, the Philippines, China and other Pacific nations. If it perceives a military threat to the area, it could assume a larger share of the defense burden in its regions of interest.** As

the U.S. removes its military forces from the mainland of Asia, the value of having U.S. military bases in Japan will decline. The responsibility for its own defense should gradually shift to the Japanese government.

It is now highly unlikely that any combat on the Korean peninsula would receive strong American political or popular support for a large U.S. expeditionary force of intervention. Should war break out in Korea, it is doubtful that the U.S. would fight another land war in Asia. Furthermore, as long as the Republic of Korea is ruled by a military dictatorship, there is reason to doubt an unreserved American commitment or desire to send American troops to fight in that part of the world. The U.S. declared policy is to provide combat air and naval support and logistic aid to those nations in the Pacific area with whom we have mutual defense treaties, but the burden of ground combat will be on the indigenous people. There is no need to maintain large U.S. ground forces for combat in an Asian war.

Middle East-Persian Gulf

The Middle East from Cyprus and Turkey to the Persian Gulf and Pakistan has been a cockpit of turmoil and conflict. The political stability of the area, the survival of Israel and the balance of power in the region have been of direct concern to the United States. However, access to the Persian Gulf area oil is not a "vital" U.S. interest. The area provides only 15% of the U.S. needs, and the oil is not worth the possible costs in lives or resources, nor the risks of a major conflict that could result from any combat operations in that remote part of the world.

Germany and Japan depend much more heavily upon the oil that flows from the nations of the Middle East, but they have made no military plans or commitments to assure its continued supply.

By controlling a large share of the world's remaining oil reserves, a group of relatively undeveloped nations with small populations of backward people have created in OPEC another growing and destabilizing center of world power. While they amass a huge share of the world's fiscal wealth, they increasingly control the economic welfare of the industrial nations. The growing cost of oil to the industrialized nations adds to the forces of inflation, causing huge payments deficits and economic depression. The area promises to be a source of conflicts and dangers for the indefinite future.

Middle East geography poses many problems to any combination of oil consuming world powers which may consider the use of military

forces in the area in order to acquire the oil they need at a reasonable cost. The region is remote by air or sea. Projecting forces by sea involves numerous ships, long voyages and passage of hazardous straits and constricted waters not suitable for large naval task forces. Air operations of any nature would require the establishment of major advance air bases, fuel supply systems and overflight approval by neutral and uncommited nations. Any U.S. and allied military operations in the Middle East would be difficult, costly and time-consuming to initiate. Such operations could be feasible with unchallenged control of the Eastern Mediterranean and Indian Ocean sea approaches, but it would be the height of folly for the U.S. to attempt to "go it alone" in that part of the world. The Western nations and Japan could combine efforts in a drastic attempt to preserve or defend their access to Mid East oil, but the hazards would be many and the prospects of success bleak.

Both Western Europe and Japan have many common interests with the United States, especially in continued access to critical fuel supplies. However, they have demonstrated they intend to define their own interests in every way and will not be subordinated to the interest of the U.S. In recent years, only the U.S. has spoken openly about using force to acquire Middle East oil. Interestingly, there has been no mention by U.S. leaders of using military force to acquire oil in other more accessible areas of the world such as Nigeria, Libya, Venezuela, Mexico or Canada.

Fuel Supply Will Limit Operations

A growing factor and hard reality which will also affect the feasibility of any future general purpose war and contingency operations is the critical supply of POL: petroleum, oil and lubricants, the fuels that make modern armies, navies and air forces run. At the peak of the Vietnam war, the U.S. armed forces were consuming over one million barrels of oil per day in combat area operations. The Department of Defense is now the largest single petroleum user in the United States. In FY 1978 the military consumed 170 million barrels of petroleum products within the continental U.S., or approximately 2.5 percent of the total national consumption. The military consumed another 50 million barrels of petroleum products in overseas' operations. Of this total consumption, aircraft operations accounted for 66 percent; ship operations, 15 percent; and installations support, 11 percent. Department of Defense energy consumption costs of which two-thirds is petroleum products, will be over $4.4 Billion in 1980.

A European war or even a remote area limited war would require such fuels on a vastly greater scale. The needs of the industrial base of the home economies and the critical sources of foreign supply could quickly limit the scope of combat operations. Even in peacetime training operations, large aircraft such as the C-5A, naval ships, thousands of tactical jet aircraft, battle tanks and tens of thousands of vehicles consume large quantities of fuel while providing no goods or services to benefit the national economy.

Unilateral Interventionism

In 1979 the U.S. Army revived the old idea of a strategic Army Corps (STRAC) or "Strike Command": a balanced Army corps-sized task force of light, mobile and ready, air transportable divisions with supporting units for possible use in the Middle East or in Third World crisis and contingencies. Military planners maintain that this rapid reaction force will provide the basis for a unilateral U.S. response to world-wide military conflicts outside of Europe.

This is the same Army concept for hasty and aggressive interventionism that led to the Dominican Republic and Vietnam deployments in 1965-66 and again stirs the pot of inter-service competition for roles and missions. The U.S. Marines consider the Fleet Marines as the appropriate "force-in-readiness" for limited war operations, and the Secretary of Defense has indicated that the Marines will provide the spearhead of a Rapid Deployment Force.

The Marines new "maritime pre-positioning" plan calls for loading heavy equipment and 30 days of supplies for three Marine Amphibious Brigades (MAB) (a MAB is a 5-6,000 man, air/ground team) aboard new multipurpose ships. The ships would be deployed to "friendly" ports near potential crisis areas where supplies could then be delivered to a beachhead. The concept is that less strategic airlift or sealift would therefore be needed to get the Marines to any trouble spot. The Rapid Deployment Force plans also include additional long range airlift capabilities. The FY1981 budget proposes $80.7 million to develop a new military cargo aircraft (C-X) to deliver heavy military equipment long distances in a manner similar to the costly and controversial C-5A of which we already have 76 in the Military Airlift Command.

The Marine Rapid Deployment Force concept appears illogical because: Marine amphibious forces are now trained and designed to carry their equipment and 30 days supply in their special amphibious ships of which there are sufficient numbers in the fleets to lift four brigades. If the troops go by strategic airlift, their air-landing fields in the

objective area may be miles from ports or beaches where they could marry-up with the pre-loaded ships. The pre-positioned supply ships could be delayed, sunk or located in ports at great distances from the actual contingency target area. Combat troops in an assault role should never be widely separated from their essential equipment and supplies. Pre-positioning heavy equipment and supplies would involve costly procurement of some $500 million worth of duplicate items already normally on hand in a Marine air ground team. Airlifting troops to pre-positioned equipment and supplies is a U.S. Army concept that has been worked on for many years; it is not a feature of Marine experience or amphibious doctrine.

The political acceptability of unilateral U.S. intervention operations ended with the costly "go it alone" experience in Vietnam. The Guam doctrine of the early 1970's established that the U.S. will expect local ground forces to perform the major share of their own defense. The idea of a unilateral U.S. police force to maintain stability has been replaced by the concept of regional military coalitions with common interests and objectives. Secretary of Defense Brown maintains that in most future contingencies, our general purpose forces will fight alongside allies.

The War Powers Act is intended to prevent the President from hastily introducing American armed forces into situations of imminent or actual hostilities, into the territory, the air space or waters of a foreign nation while equipped for combat — or in numbers which "substantially enlarge" American forces located in a foreign state and equipped for combat in the absence of a formal declaration of war or specific Congressional authorization. It has in fact had the opposite effect. It does not apply if the U.S. or its armed forces are attacked. The Act does specifically permit the President, for the first time in American history, to commit U.S. armed forces in a foreign country for up to ninety-two days without Congressional sanction or declaration of war. Congress can legally terminate the involvement at any time but it would probably not order U.S. troops home once they are involved in combat.

The unilateral intervention by "rapid deployment" U.S. police forces to maintain stability or to protect our interests could present the same appearance of aggression as the blatant intervention of ready Soviet forces into the affairs of Afghanistan in December, 1979. Rapid reaction crisis forces with costly new aircraft and ships perpetuate the delusion that military solutions to world discord or the maintenance of U.S. prestige, honor and influence can be assured by more arms and more military spending.

MILITARY SPENDING

Most Americans want their country to have a strong defense. They have willingly supported large military budgets, and the Congress has generally gone along with most of what the Defense Department has requested. **But most Americans also want defense dollars spent wisely and effectively and expect huge spending for armed forces to result in improved military capability for the United States.** Particularly in this time of growing demands for federal funds from all sectors and the taxpayer revolt against wasteful government spending, there should be renewed pressures on the Defense Department to justify its programs in language that makes sense or to face reductions in spending. President Carter described his revised federal budget for 1981 as "austere," but the proposed budget will require a total expenditure of over $611 Billion, an increase of about $47 Billion over fiscal 1980. As a result of political pressures, not military needs, the defense budget, the biggest single program paid for out of general taxes, is apparently exempt from all cutbacks in the 1981 Carter budget. The new budget asked for $161.8 Billion for the Defense Department and for the construction of nuclear weapons by the Department of Energy, with big increases for the purchase of new weapons and the funding of nuclear programs.

At the same time, economic growth and increases in the size and age of the labor force require increased spending from the trust funds, that part of the budget which is paid for by Social Security taxes, gasoline taxes and other taxes that can only be used for designated purposes and over which Congress in the short term has little control. Spending for Social Security and other trust funds will increase by $20.5 Billion in 1980, but receipt from taxes which go into these funds will increase by more than $22 Billion. This part of the budget more than pays its own way.

The pinch comes in the non-military part of the federal funds budget: that part paid for out of income taxes and other general revenues. Since all military spending comes out of federal funds, every additional dollar spent on the military must be taken from social and economic development, energy, education, employment and training, space, housing and special health and welfare programs. For those Americans who need the benefits from these programs, this is indeed an "austere" budget.

The debate over SALT II shifted away from the logic and purposes of strategic arms limitations to the question of how much to increase military spending in order to negotiate future arms treaties from a position of greater strength. The convoluted reasoning is that by increasing our arms, the other side will be more inclined to agree on future arms reductions.

Critics of SALT II desired that the Administration commit itself to a 5 percent real growth in the military budget for a period of five or more years. The nation is already committed to an annual increase of 3 percent in support of NATO forces. But with the 1980's promising to be a period of low economic growth — perhaps only about 2 percent a year — then in order to spend more on the military, difficult adjustments will have to be made in other sectors. Some current non-defense activities will have to shrink. There are only two choices: higher taxes, reducing private expenditures, or less spending on social, energy, education, health and development programs.

But spending more for military forces will not make us more secure and will not encourage the Soviets to reduce their own military efforts. The U.S. already devotes nearly half of all the discretionary funds available in the budget (non-trust funds) to the military. It is not in our national or economic interest to increase military spending by large amounts each year merely to compete with presumed Soviet spending programs. Since the CIA can only estimate, it is not known for certain how much the U.S.S.R. spends. Furthermore, nations do not go to war with money but with proper combinations of manpower, weapons and supporting resources sufficient to accomplish military missions. Spending more on arms merely to compete with the presumed spending by the other side is a pointless and endless waste of national wealth.

A Paradox Budget

The new military budget is a paradox. At the highest price in our peace-time history, it does not provide for the defense of the United States. The armed forces and weaponry that it provides cannot protect the American people from nuclear war, cannot guarantee victory in conflicts in foreign countries, cannot prevent disagreeable changes in the world, and cannot assure prosperity at home. The $162 Billion military budget cannot make the world stable or safe for the U.S. No amount of military forces will assure American dominance or unquestioned military superiority in the world of the 1980's.

No military budget could do these things. This is the fundamental

problem Americans face. Many Americans have unrealistic expectations of what military spending and forces can do for us. Unquestionably, $162 Billion is much money, and 10,000 strategic nuclear weapons, 2 million soldiers, 500 naval ships, and 10,000 aircraft add up to a lot of combat power. But the new reality created by the development of nuclear weapons and by the growth of military and economic power in other parts of the globe has greatly diminished the ability of military force to effect change.

Nobody knows what an adequate military budget would look like. Although many military spokesmen term the 1981 budget inadequate, there is no consensus on an alternative. On many of the fundamental issues of national defense, there are no military "experts." Military officers and analysts disagree on the correct choices. Guess work and habit are the "science" of modern military strategy. Now, more than ever, military planning is a fundamentally speculative enterprise.

U.S. military officials have on occasion addressed the subjective quality of military decision-making. Admiral Thomas Hayward, Chief of Naval Operations, refers to "the vagaries inherent in the calculation of any force balance." General George Brown, former Chairman of the Joint Chiefs of Staff, stated that "how much is adequate is largely subjective because it depends upon uncountable factors."

One thing is certain: each new weapon we add spurs the Soviets to build more, and each new weapon the Soviets build spurs us to build more and the danger of war increases.

A Strategy of Impossible Goals

The Defense Department has very ambitious and expensive military objectives. Because of this, there is an inevitable gap between what the military wants to do (or thinks is demanded) and the resources which are available. U.S. military objectives discussed in this report include:

- Capability to deter any war from beginning;
- Capability to win any war in which the U.S. might become involved, including the ability to terminate any nuclear war on terms "favorable" to the U.S.;
- Protection of dozens of allies and friends around the world;
- Preservation of world military "balance" and "stability";
- Naval superiority;
- Technological superiority in all weaponry.

Most of these goals are tremendously difficult, if not impossible, to achieve for the U.S. or for any other country. They are also

extraordinarily costly. Serious American policy makers recognize that the United States simply cannot afford the kind of military establishment that many military analysts believe would be "adequate." Compromises and half-way measures are the best that can be achieved, but the continued proclamation of unattainable military objectives helps to feed public fears and doubts about the adequacy of U.S. military forces.

Responsible U.S. leaders recognize there are important limitations on the ability of the U.S. to influence world events through military forces. They are aware of limits on our ability to understand the world and to tailor it to our specifications. President Carter has said, "As the world becomes more complex, it is more important than ever before that we do not oversimplify events abroad. Bad analysis inevitably leads to bad policy."

Nobody really knows how to measure military effectiveness nor how to tell whether it is the U.S. or the Soviet Union that would win a war. We look almost exclusively at various measures of resources expended on armed forces and at numerical comparisons of different types of weapons.

On the military strength of the U.S., General David C. Jones, Chairman of the Joint Chiefs of Staff, has said, "There is too much pessimism about our current capability. I would not swap our present military capability with that of the Soviet Union, nor would I want to trade the broader problems each country faces."

Unrealistic Military Requirements

The pursuit by the Defense Department of costly, overly ambitious military goals is no better illustrated than in the case of NATO. The cost of NATO for the U.S. in the fiscal 1981 budget is more than $50 Billion. **The U.S. has been attempting for many years, but with renewed vigor in the past couple of years, to implement an essentially unworkable strategy of substituting U.S. conventional forces for those of Western Europeans in an endeavor to be able to win a conventional war in Europe with the Soviet Union.**

Basically, there is little that the U.S. can do that can substantially reduce the Soviet military threat to Western Europe. Geographic realities in particular can only be slightly modified by U.S. actions. There are no practical measures that can be taken which will increase significantly the prospect of victory in a war in Europe. There is no margin of military power that can be accumulated that guarantees immunity to possible Soviet pressure. The military balance will always be "uncomfortable."

The military significance of the buildup of NATO is less than meets the eye. All the military hustling around NATO, perhaps best exemplified by the 3 percent increase in spending commitment, is more an exercise in symbolism than anything else. General Alexander Haig, the recent NATO Commander, seemed almost willing to grant this when he observed that the primary importance of NATO forces in Central Europe is "political and psychological, rather than purely warfighting." He believes that Western Europe needs an "umbrella of confidence" for political strength and economic progress.

Whether the American people are willing to spend Billions on military forces to defend other countries in such circumstances is another question. **It is not the job of the U.S. to provide "umbrellas of confidence" for other countries who are capable of looking after their own interests.** These are not the formulas on which stable alliance systems can be built today.

The Nuclear Focus

Recent military budgets have been called "NATO budgets," but the big increases in these new budgets were actually in the area of nuclear weapons. Funding for conventional forces, in constant dollars, actually declined from fiscal 1979. Funding in FY 1981 for strategic nuclear weapons programs is up 42 percent in current dollars from FY1979, while funding for the production of new nuclear weapons warheads (in the Department of Energy budget) has more than doubled since the Carter Administration came into office, to provide warheads for the Minuteman III missile, cruise missile, Trident missile and other weapons.

Assistant Secretary of Defense Robert Pirie summarized the fiscal 1980 budget increases by stating that "the increase represents major initiatives to strengthen our strategic forces while outlays for conventional forces remain near constant." General Jones, Chairman of the Joint Chiefs, underscored the nuclear focus: "We will need to increase our defense spending in the years ahead, particularly in the area of strategic nuclear forces."

Despite the commitment of President Carter to lessen U.S. reliance on nuclear weapons, a nuclear buildup has now become the focus of spending increases. Despite the broad consensus that both countries already have more than enough nuclear arms, competition with the Soviet Union is more than ever at the core of U.S. military activity.

A number of new nuclear weapons programs are obvious targets for those who want to control escalating military expenditures. These include the MX missile, the Trident submarine and Trident II missile, the Pershing II missile, the sea-launched cruise missile, anti-satellite programs, and huge investments in nuclear weapons production plants.

It is necessary — and possible — for the average citizen to form his own judgment about whether the United States really needs more nuclear weapons at this time. Today the U.S. has some 30,000 nuclear weapons, thousands of which are located overseas in possible theaters of war and about 10,000 of which can be delivered at intercontinental ranges on the Soviet Union. The fiscal burden of nuclear weapons is growing, with an expected doubling of spending on strategic forces over the next five years. The danger of nuclear war is increasing and in the next decade the U.S. is going to build 20,000 nuclear weapons.

Controlling the nuclear arms race through SALT agreements, cutting out unneeded programs and controlling unnecessary federal spending are becoming more and more overlapping objectives. Slowing the upward spiral in government budgets requires slowing the nuclear arms buildup. We will be improving our security through both steps.

OPPORTUNITIES FOR COST SAVINGS IN THE MILITARY BUDGET

The MX Missile. (FY '81 request: $1.6 Billion)

There are two parts to this program: a new intercontinental ballistic missile (ICBM) and a racetrack basing scheme for the missile. Last year the Defense Department received almost a Billion dollars in new money for the MX program, and is asking for $1.6 Billion in 1981. In subsequent years the MX missile will require three to four Billion dollars each year at today's prices. If the CBO estimate of costs is accurate, each missile will cost 1 3 of a Billion dollars when the project is completed.

Two hundred new ICBMs, each with 10 highly accurate hydrogen weapons, would be a new threat to the Soviet Union but would not add to our defense. Instead they would probably cause the Soviets to build more missiles to launch at the U.S. Moving the missiles around among hundreds of elliptical racetracks in the West could make verification of future arms control agreements much more difficult and in the end probably not deceive the Russians. The adverse environmental impact and the costly construction of 10,000 miles of concrete roads in Utah and Nevada would be acceptable if MX contributed to national defense, but it does not. Much of the Southwest could become a vast "sponge" for additional Soviet nuclear weapons.

Considering the 10,000 nuclear weapons we already have and the thousands now programmed for our submarines and for our bomber force, the Air Force has failed to present any sound requirements for more land-based ICBMS. The MX program should be terminated before any more money is wasted. A thorough study should first be made to determine whether the United States requires more land-based missiles.

Trident Submarine and Trident II Missile. (FY '81 request: $1.2 Billion)

The cost of each giant Trident missile-launching submarine is approaching $2 Billion. A gold-plated monster, the submarine is

a year and a half behind in production schedules and continues to be plagued with enormous cost overruns, and the first submarine has not yet been tested at sea. The Trident program has from the beginning been a premature response to a limited Soviet anti-submarine warfare threat. There is little urgency to the submarine construction program as the Trident missiles are being installed in twelve of our Poseidon submarines. Last year the Congress appropriated $10 million to study whether a cheaper missile submarine could be developed, and this year $13 million has been requested to continue the study. Some less expensive platform to launch missiles at sea needs to be developed.

The Trident II missile, with a range of 6,000 miles, will be installed in the Trident subs at a later date. There is $36 million in this year's budget for research and development of the Trident II missile. The Trident II missile will be much more accurate than current submarine-launched missiles, therefore posing for the first time a sea-based threat of a first strike against Soviet missile silos. This will escalate the arms race.

Pershing II Missile. (FY '81 request: $146 million)

The Pershing II ballistic missile, planned to replace the Pershing IA missile now with the U.S. Army in Europe, will have a range of over 1,200 miles, thus converting a "tactical" battlefield nuclear weapons system into an intermediate range system, one capable of attacking the Soviet Union with nuclear weapons from West Germany. Targets at that range in the Soviet Union can already be covered by the submarine-launched Poseidon missiles assigned to NATO and by some forward-based aircraft. Putting Pershing II missiles in the hands of the U.S. Army and our allies in Germany could have destabilizing political and military consequences, increase the chances of nuclear war escalation in Europe, and make future arms control agreements either for Europe or in the SALT much more difficult.

Sea-Launched Cruise Missile. (FY '81 request: $206 million)

Work continues on launching highly accurate, nuclear-tipped cruise missiles from submarines under the sea and from ships on the sea to land targets. Putting nuclear armed cruise missiles in our fleet of 100 nuclear powered attack subs which will be in the fleet by late 1980's will effectively convert them to "strategic" submarines with a capability similar to our existing ballistic missile subs. The Pentagon is proceeding

with the program, but a final deployment decision has not been made. With our present thousands of strategic submarine-launched ballistic missile (SLBM) warheads and our future air-launched cruise missiles (ALCM) and ground-launched cruise missles (GLCM), land targets can be more than adequately covered without imposing this additional mission on our fleet submarines whose main mission is to attack enemy submarines and ships.

Anti-Satellite Programs. (FY '81 request: about $125 million)

The Carter Administration's most dangerous weapons initiative has been its speeding up of programs to develop an effective capability to destroy Soviet satellites. Begun in fiscal 1979, such programs indicate the U.S. could have an advanced system within 2 or 3 years. Soviet activity triggered the U.S. move, but Soviet anti-satellite capability has apparently been greatly exaggerated. According to General David C. Jones, Chairman of the Joint Chief of Staff, the effectiveness of the Soviet anti-satellite weapon is quite limited "both in terms of the number they can launch and the types of U.S. satellites they can go against."

The U.S. spent a total of about $200 million in fiscal 1980 on satellite defense programs, some of which should be continued. However, in pushing provocative anti-satellite programs of its own, the Defense Department is overreacting to Soviet deployments.

Modernization of Nuclear Weapons Production Facilities.
(Department of Energy FY '81 request: $94 million)

Funding for the development and production of nuclear warheads for both strategic and theater weapons systems is contained in the Department of Energy (DOE) budget, an anomaly which helps to prevent adequate public oversight of nuclear weapons programs. The DOE has initiated a $500 million program titled "Weapons Complex Restoration Initiative." The first increment of funding of fiscal 1980 was $81 million and $94 million was requested for fiscal 1981. The money will be spent on improving the plants where nuclear weapons are manufactured.

This program is in part a result of the large expansion of nuclear weapons manufacture that has taken place under the Carter Administration to provide warheads for cruise missiles, Trident missiles and other new nuclear weapons programs.

Advanced Attack Helicopters (AAH). (FY '81 request: $222 million)

The AAH is a very expensive program at a total cost of over $4.1 Billion. It does not justify itself in terms of improved combat capability. The 545 AAHs will cost over $7.6 million each, or about five times the price of the AH-1 Cobra which is still in production. The AAH is not five times better than the Cobra, nor can it be in five different places at the same time. It is not five times less vulnerable. There are a number of other major anti-tank weapons which can fill the mission (A-10, TOW, Dragon, Copperhead, new anti-tank mines, etc.). The program should be deferred while alternative systems continue to be studied.

SSN-688 Nuclear Attack Submarine. (FY '81 request: $602 million)

The SSN-688 program is another example of buying a Rolls Royce to replace a Ford sedan. These are very expensive submarines, costing over $260 million per sub. The Navy already has 33 SSN-688 subs operational or being built. The vast majority of the Navy's 72 nuclear-powered attack submarines and 23 currently under construction, will be operational well into the 1990's (given a 30-year operating life). The U.S. has the time to begin designing a less costly replacement for the earlier nuclear attack subs.

XM-1 Tank. (Fy '81 request: $1.03 Billion)

The military budget continues to emphasize procurement of tactical combat vehicles with funding for increased quantities of the new XM-1 tank, and increased procurement of the Infantry Cavalry Fighting Vehicle. Production of the M60 series tank is being terminated.

In the past three fiscal years, we have procured 3,348 tracked combat vehicles. In FY 1980 the budget funded 352 new XM-1 tanks, and money for 569 is being requested in FY 1981. The requirements and the rationale for employment of these increasingly costly items should be analyzed.

Although the XM-1 battle tank has some improved features, such as greater speed, better armor and gun stability while moving, its over-

all cost effectiveness as compared to the M60 series costing half as much is certainly dubious. A tank that costs over 1.5 million dollars each and that will be prepositioned in large numbers in dead storage in vulnerable depots in Germany is a questionable investment.

The prepositioning plan to have heavy equipment for two U.S.-based armored divisions and three mechanized infantry divisions in Germany will require some 1,584 new tanks, and these same divisions will need an equal number of tanks for training at their home bases. We already have some 2,400 tanks with our divisions and brigades deployed to Germany in support of our NATO commitment, plus an additional 600 tanks in reserve and in prepositioned storage.

The Army's procurement objective is to have about 17,000 tanks of all types available for active, reserve and mobilization forces. There will be a requirement for thousands of other tactical wheeled vehicles. Most of these will be based in the CONUS. A critical reality affecting the feasibility of ever employing these huge quantities of tracked and wheeled combat vehicles is the time it would take to move such large

The Top Hardware Programs

Their Total Procurement Cost is

$154.4 Billion

Programs	Quantity	Total Cost (in Billions)
Trident Submarine & Missile Program	13	$28.3
F-16 Fighters	1,396	$18.5
F-15 Fighters	749	$14.2
F-18 Fighters	811	$29.1
FFG Ships	48	$11.4
SSN-688 Submarines	39	$11.9
F-14 Fighters	521	$11.6
XM-1 Tanks	7,058	$12.5
A-10 Fighter	743	$ 6.0
Air-Launched Cruise Missile	3,424	$ 5.2
Blackhawk Helicopter	1,107	$ 5.7
GRAND TOTAL		$154.4 Billion

Data: Department of Defense and General Accounting Office

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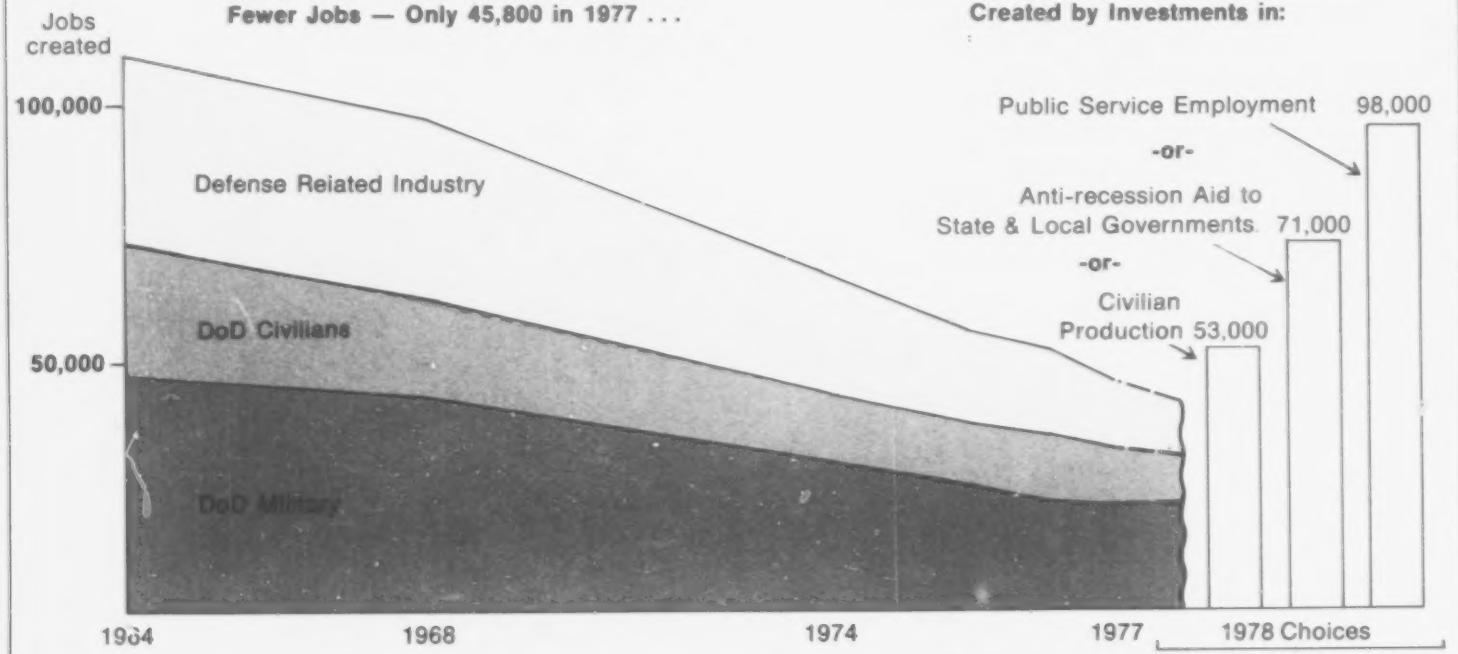
THE VANISHING ARGUMENT FOR MILITARY SPENDING

One Billion Dollars Now Creates More Civilian than Military Jobs



Source: Center for Defense Information. Based on data from Department of Defense, Congressional Budget Office, and Bureau of Labor Statistics.

heavy units to Europe by sea. Under the most favorable conditions, it would take many months to deploy them into combat.

Reimbursement for U.S. Forces in Japan.

According to Defense Secretary Brown, even after allowing for certain Japanese contributions, "The United States will still incur direct annual cost of more than $1.1 Billion for the stationing of U.S. forces on Japanese territory." Despite the stress on NATO in recent U.S. military budgets, the U.S. still spends Billions of dollars on forces for war in Asia. According to calculations of the Brookings Institution, general purpose forces for Asia will cost more than $27 Billion in Fiscal 1980. If the U.S. is going to continue to maintain large military forces for Asia and Japan, the Japanese government should make a much larger contribution to the cost of these forces. Japan can certainly afford to make these payments.

Reimbursement for U.S. Forces in Germany

In the early 1970's there were arrangements between the U.S. and Germany to help offset the costs of U.S. armed forces stationed in Germany. Those agreements have since lapsed, for the most part. It is time, however, to raise again with Germany (and perhaps with other European countries who benefit from American military programs) the issue of a more equitable distribution of the costs of NATO defense. Recent declines in the value of the dollar increase the need for a more hard-headed American approach.

The U.S. devotes a higher percentage of its GNP to defense than any other NATO country and spends much more per capita on defense than other members of NATO. Germany spends 3.3 percent of its GNP on defense compared with 6.0 percent for the U.S. The U.S. will not be able to afford to continue to maintain more than 200,000 troops in Germany and lead the rearmament of NATO unless contributions to NATO's defense become more balanced.

Defense Related Employment

The FY80 budget claimed it would increase defense related employment substantially — rising by 80,000 to 120,000 jobs. Pentagon figures show 2 million men and women are directly employed in the defense-related industries. As many as one-third of all engineers and scientists in the U.S. are involved in some kind of defense-related work.

The military economy has grown so big that it has contributed to pushing the civilian economy into decline. The pre-emption of technical skills and capital resources for aerospace, electronics, heavy weapons and equipment and associated military projects impoverishes the civilian sector and checkmates growth in productivity, which in the past has been a central element of American economic strength. The combination of inflation and unemployment is largely an outgrowth of excessive military spending.

Missiles, tanks, fighter bombers and submarines do not become part of the consumption and production process contributing to our standard of living and strengthening the country's economic base. They do not improve the quality of life. We now find ourselves with neither greater military security nor the kind of civilian prosperity that was once the envy of the world — and the true basis of our national security.

President Carter has stated ". . . **When you spend money for defense, you don't spend it on education or health or other services or goods. And I think the shift away from weapons toward peaceful goods and services in the long run is favorable for world peace, and also you get more jobs per dollar spent. . .**".

NEW REALITIES IN A CHANGING WORLD

The United States is now facing far-reaching decisions in its international relations. Radical changes have taken place in America and throughout the world in recent decades. The U.S. is still the dominant nation. It has, however, become vulnerable to nuclear destruction, its economic strength has become dependent upon foreign oil and other critical raw materials, and social instability has affected our own society as well as our friends and former followers. Our moral leadership has declined, and not every nation is inspired by U.S. style and example. Our major allies accept the U.S. in its role as military leader of independent nations, yet they hesitate to follow even when common interests call for firm military commitments or economic risks. Special interest groups within all the allied nations weaken their determination and unity of purpose. Conflicting national interests—political, economic, social and religious — are the historic causes of international turmoil, instability and war, but in the modern world, military power can no longer assure stability, security or peace. America's influence in world affairs is still very strong, but as other nations gain power, our influence is reduced.

A sound national policy calls for inspired and courageous leadership based upon the support of confident, productive and well-informed people united in their national goals. The United States, as part of an interdependent world, still can lead with its myriad of strengths. Its courage, restraint and example can help guide the world away from conflict and wars toward progress and peace.

The world's problems are complex, and most are beyond our capability to solve alone. The dangers of nuclear war, regional famines, depletion of fuels and natural resources, poverty, ignorance and the aspirations of the deprived nations are all problems whose solutions require cooperation of the East and West, NATO and the Warsaw Pact, and the U.S. and the Soviet Union. Unless the armaments race is halted, there will not be sufficient resources for any combination of nations to remedy the ills that beset the world.

Better communications, understanding and good will between peoples can reduce suspicion and hostility that fuel the arms race. Foreign policies must seek cooperation rather than confrontation between nations. We must work for compromise and co-existence rather than accept armed conflict as a ready alternative to negotiation.

The President, the Congress and the media will have to improve their cooperation in efforts to inform the American people about the changing realities of foreign, defense and economic policies that respond to today's world problems rather than to yesterday's expectations.

The dominant reality that hangs over the world is the growing threat of nuclear destruction. The nuclear superpowers are the custodians of this menace, and they carry the burden of responsibility to avoid nuclear war by constant restraint and self-control. Our duty is to combine courageous and sensible protection of our national interests with a steady, purposeful pursuit of peace and progress for all of humankind.

Appendices

DEPARTMENT OF DEFENSE

STRATEGIC FORCES HIGHLIGHTS

	FY 64	FY 68	FY 79	FY 80	FY 81
STRATEGIC OFFENSIVE:					
LAND BASED ICBM'S:					
TITAN	108	54	54	54	54
MINUTEMAN I	600	570	-	-	-
MINUTEMAN II	-	394	450	450	450
MINUTEMAN III	-	-	550	550	550
BOMBER SQUADRONS:					
B-47 B-58	36	-	-	-	-
B-52C-F/D	25	17	5	5	5
B-52G/H	17	17	16	16	16
FB-111	-	-	4	4	4
FLEET BALLISTIC SUBMARINES:					
POLARIS	21	41	10	5	-
POSEIDON			31	31	31
TRIDENT				1	2
STRATEGIC DEFENSIVE:					
FIGHTER INTERCEPTOR SQDNS:					
ACTIVE:					
F-101, F-102, F-104	27	15	-	-	-
F-106	13	11	7	7	7
AIR NATIONAL GUARD:					
F-4	-	-	2	2	3
F-86, F-89, F-100	19	2	-	-	-
F-101	-	-	3	3	2
F-102	10	20	-	-	-
F-106	-	-	5	5	5
AIR DEFENSE BATTERIES:					
NIKE-HERCULES	147	123	-	-	-

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DEPARTMENT OF DEFENSE

GENERAL PURPOSE FORCES HIGHLIGHTS

	FY 64	FY 68	FY 79	FY 80	FY 81
LAND FORCES:					
ARMY DIVISIONS:					
ACTIVE	16	19	16	16	16
RESERVE	23	8	8	8	8
MARINE CORPS DIVISIONS:					
ACTIVE	3	4	3	3	3
RESERVE	1	1	1	1	1
TACTICAL AIR FORCES:					
AIR FORCE WINGS:					
ACTIVE	21	25	26	26	26
RESERVE	7	8	11	11	12
MARINE CORPS WINGS:					
ACTIVE	3	3	3	3	3
RESERVE	1	1	1	1	1
NAVY ATTACK WINGS:					
ACTIVE	15	15	12	12	12
RESERVE	2	2	2	2	2
NAVAL FORCES:					
ACTIVE FLEET	803	875	388	395	418
CARRIERS (CVA)	15	14	13	13	12
OTHER SHIPS (ACTIVE & NRF)	82	49	10	7	7
RESERVE SHIPS	62	54	53	53	42
FLEET AUXILIARY FORCE SHIPS		1	19	22	22

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DEPARTMENT OF DEFENSE BUDGET

DEFENSE EMPLOYMENT OUTLOOK

(END-YEAR-IN-THOUSANDS)

	FY 64	FY 68	FY 79	FY 80	FY 81	CHANGE FY 80-81
CIVILIANS						
ARMY	453	542	359	359	359	0
NAVY/MARINE CORPS	346	433	310	308	310	+ 2
AIR FORCE	338	357	245	244	241	– 3
DEFENSE AGENCIES	37	74	77	78	79	0
TOTAL CIVILIANS	1,174	1,405	991	991	990	– 1
MILITARY (ACTIVE)						
ARMY	972	1,570	758	774	776	+ 2
NAVY	667	765	522	528	534	+ 6
MARINE CORPS	190	307	185	185	185	0
AIR FORCE	856	905	559	558	565	+ 7
TOTAL MILITARY	2,685	3,547	2,024	2,045	2,059	+ 14
TOTAL MILITARY AND CIVILIANS	3,859	4,952	3,015	3,036	3,049	+ 13
DEFENSE RELATED INDUSTRY	2,280	3,174	1,921	2,022	2,189	+ 167
TOTAL DEFENSE MANPOWER	6,139	8,126	4,936	5,058	5,238	+ 180

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DEPARTMENT OF DEFENSE BUDGET

FINANCIAL SUMMARY BY MAJOR PROGRAM

(BILLIONS OF $)

MILITARY PROGRAM	CURRENT DOLLARS TOTAL OBLIGATIONAL AUTHORITY FY 1979	FY 1980	FY 1981	CHANGE FY 1980-81
STRATEGIC FORCES	8.4	10.9	12.0	+1.2
GENERAL PURPOSE FORCES	47.4	51.9	58.0	+6.1
INTELLIGENCE AND COMMUNICATIONS	8.1	9.1	10.7	+1.6
AIRLIFT AND SEALIFT	1.7	2.0	2.3	+0.3
GUARD AND RESERVE FORCES	7.0	7.3	8.3	+1.0
RESEARCH AND DEVELOPMENT	10.8	11.8	14.0	+2.3
CENTRAL SUPPLY AND MAINTENANCE	12.8	14.5	16.7	+2.3
TRAINING, MEDICAL, OTHER GEN. PERS. ACTIV.	25.7	28.7	32.7	+4.0
ADMINISTRATIVE AND ASSOC. ACTIVITIES	2.3	2.6	3.0	+0.4
SUPPORT OF OTHER NATIONS	0.5	0.6	1.0	+0.4
TOTAL MILITARY FUNCTIONS	124.8	139.3	158.7	+19.4

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DEPARTMENT OF DEFENSE BUDGET

FINANCIAL SUMMARY BY APPROPRIATION CATEGORY

(BILLIONS OF $)

	CURRENT DOLLARS TOTAL OBLIGATIONAL AUTHORITY			
APPROPRIATION TITLE	FY 1979	FY 1980	FY 1981	CHANGE FY 1980-81
MILITARY PERSONNEL	28.6	30.8	33.4	+ 2.5
RETIRED PAY	10.3	12.0	13.7	+ 1.8
OPERATION AND MAINTENANCE	37.9	43.4	49.2	+ 5.8
PROCUREMENT	31.4	35.8	40.5	+ 4.8
RDT&E	12.4	13.5	16.5	+ 3.0
MILITARY CONSTRUCTION	2.5	2.3	3.3	+ 1.0
FAMILY HOUSING	1.6	1.5	2.0	+ 0.5
REVOLVING AND MANAGEMENT FUNDS	0.1	—	0.1	+ 0.1
TOTAL MILITARY FUNCTIONS	124.8	139.3	158.7	+19.4

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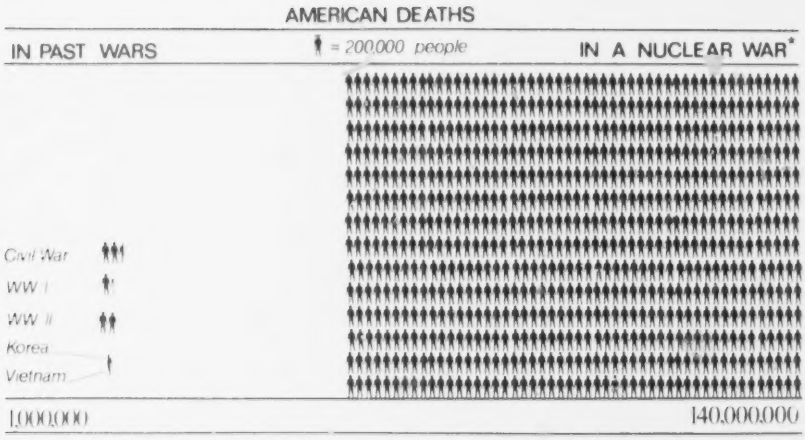
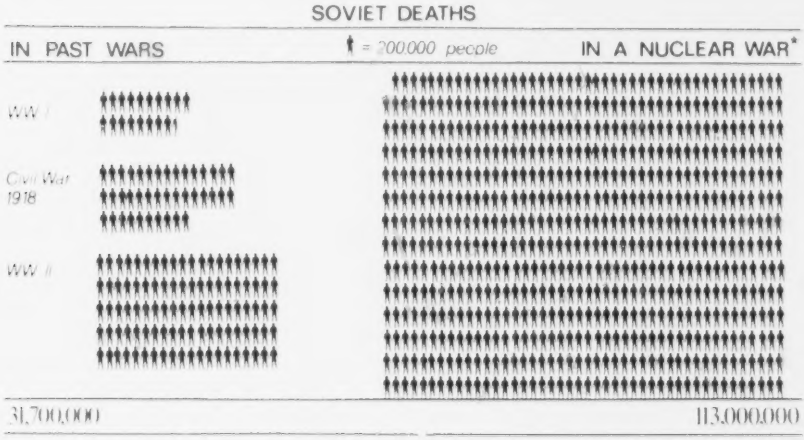
Nuclear War Means Deaths





*estimate by US National Security Council

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